FIG. 1

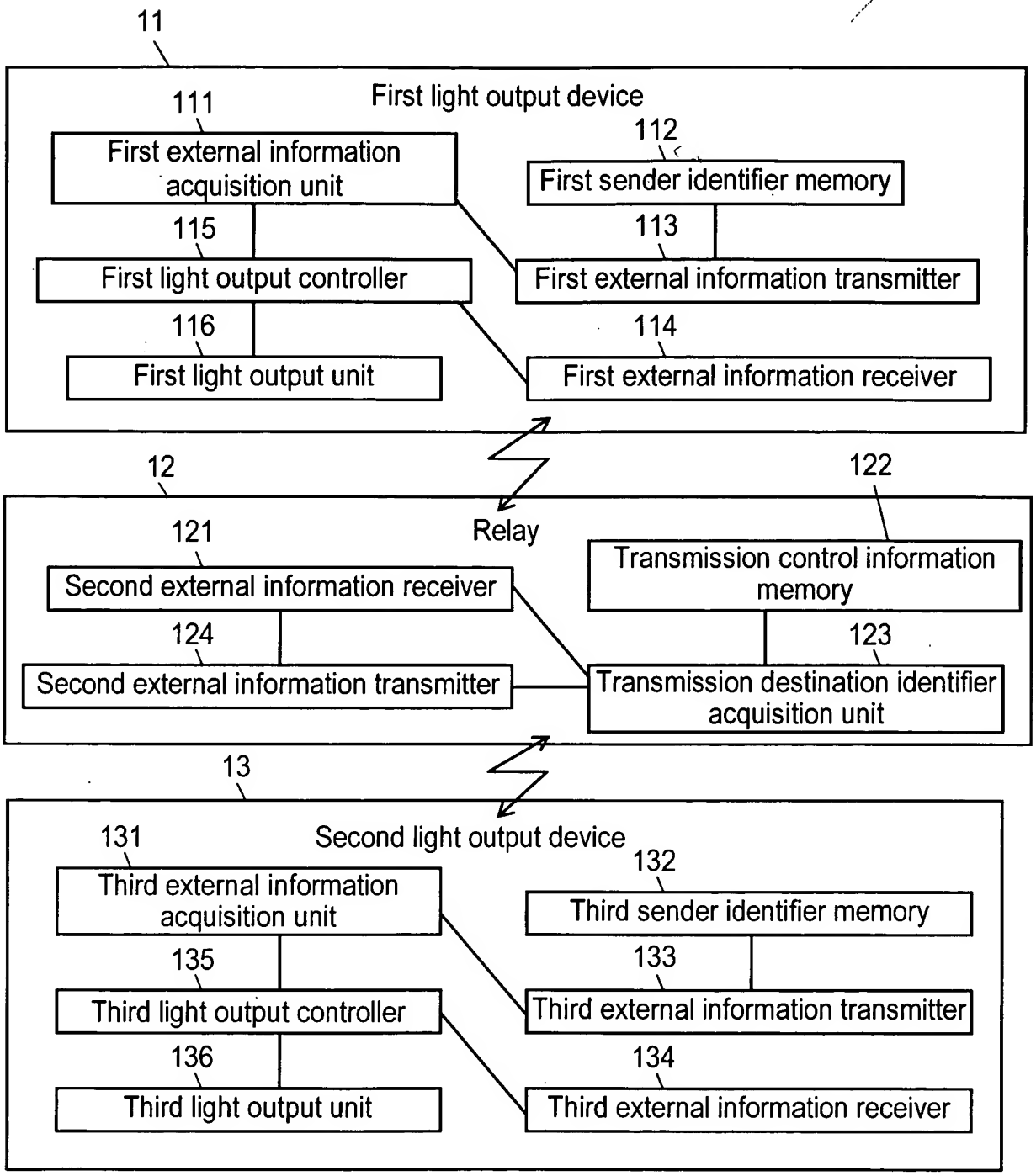

11
First light output device
111
First external information acquisition unit
112
First sender identifier memory
115
First light output controller
113
First external information transmitter
116
First light output unit
114
First external information receiver
12
Relay
122
121
Second external information receiver
Transmission control information memory
124
123
Second external information transmitter
Transmission destination identifier acquisition unit
13
Second light output device
131
Third external information acquisition unit
132
Third sender identifier memory
135
133
Third light output controller
Third external information transmitter
136
134
Third light output unit
Third external information receiver

FIG. 2

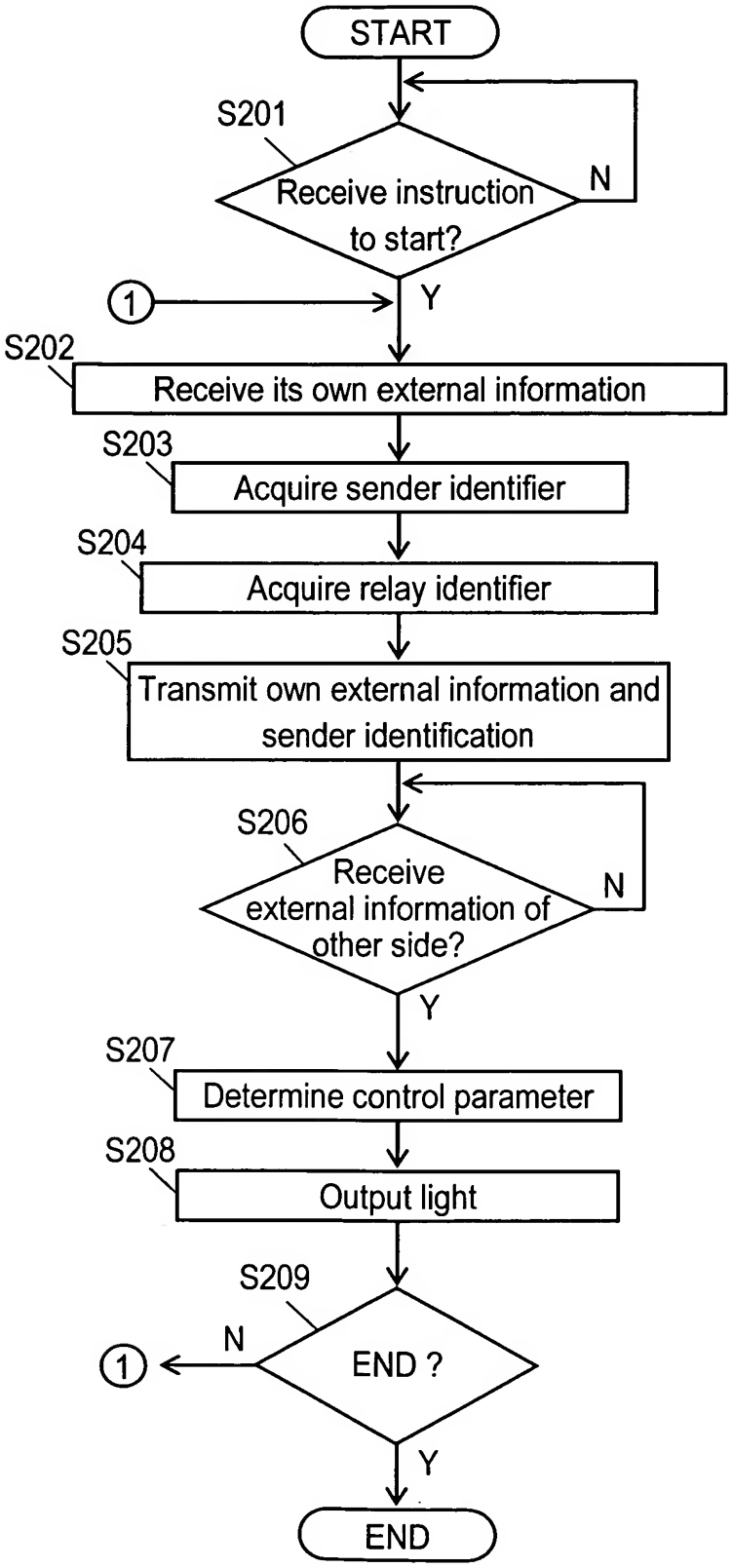

START
S201
Receive instruction to start?
N
Y
1
S202
Receive its own external information
S203
Acquire sender identifier
S204
Acquire relay identifier
S205
Transmit own external information and sender identification
S206
Receive external information of other side?
N
Y
S207
Determine control parameter
S208
Output light
S209
END ?
N
1
Y
END

FIG. 3

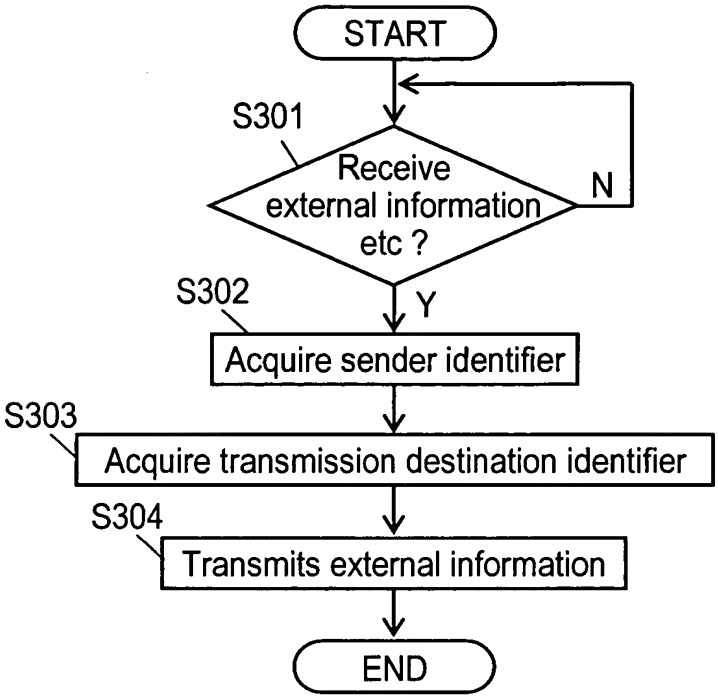

START
S301
Receive external information etc ?
N
Y
S302
Acquire sender identifier
S303
Acquire transmission destination identifier
S304
Transmits external information
END

FIG. 4

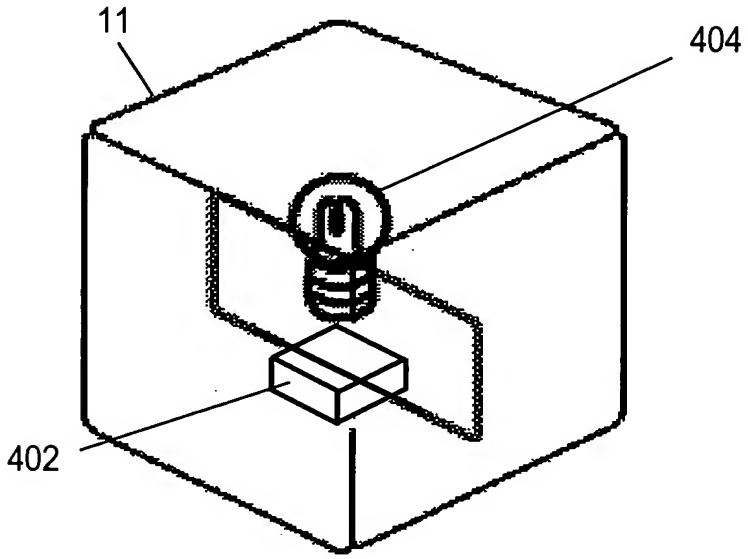


FIG. 5

Voltage	Own pressure information(n)	Other's pressure information (m)
0	0	——
	——	0
min(n,m)	1~9	——
	——	1~9
n+m but,max30	Not less than 10	Not less than 10

FIG. 6

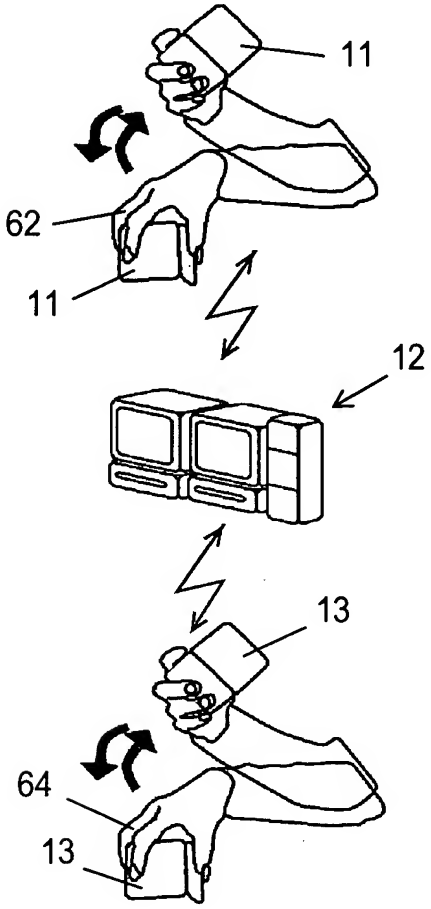

11
62
11
12
13
64
13

FIG. 7

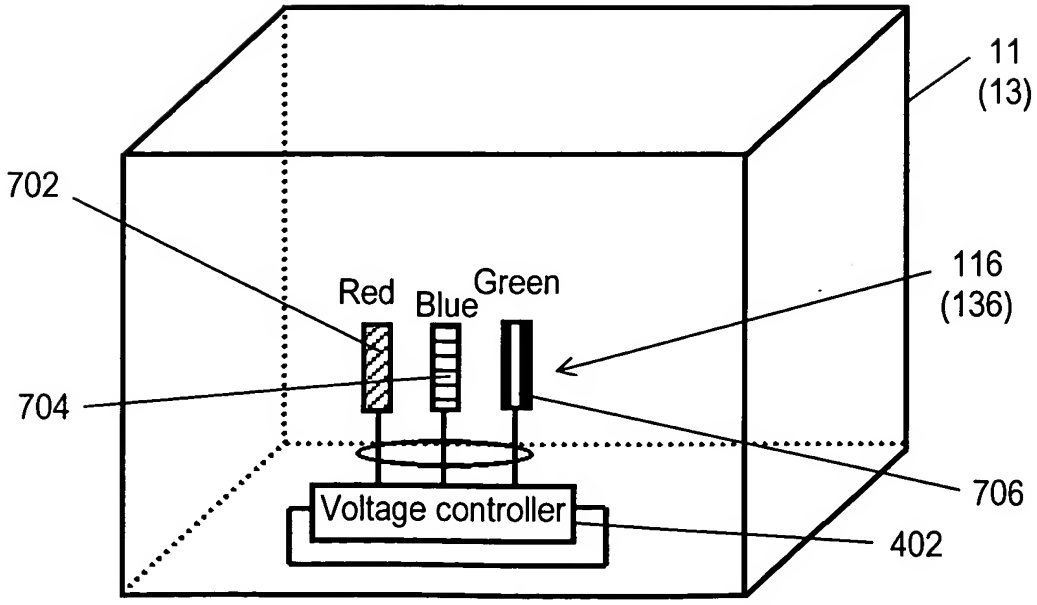

11
(13)
702
116
(136)
Red
Blue
Green
704
706
Voltage controller
402

FIG. 8

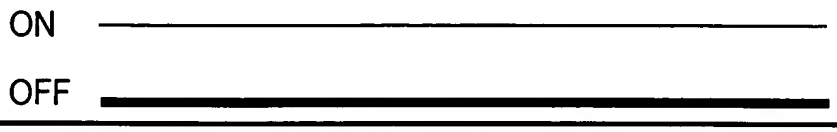
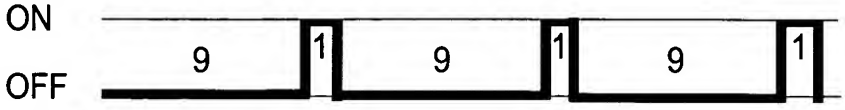
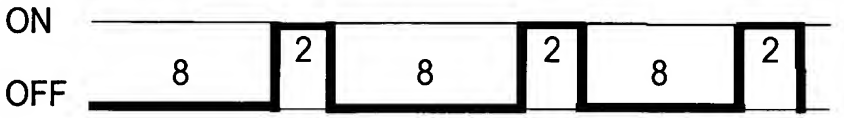
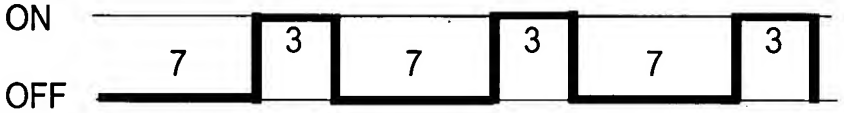
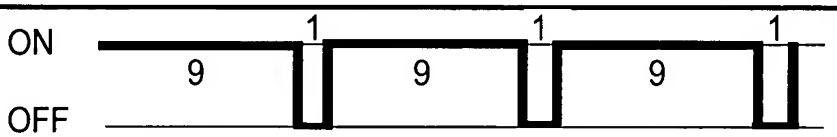
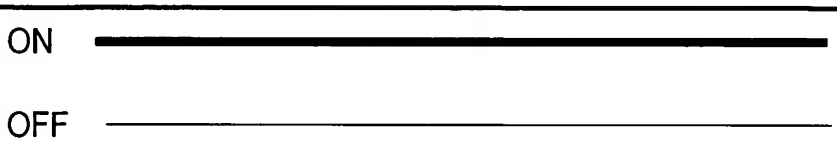
Light control parameter	ON/OFF pattern
0	
1	
2	
3	
⋮	
9	
Not less than 10	

FIG. 9

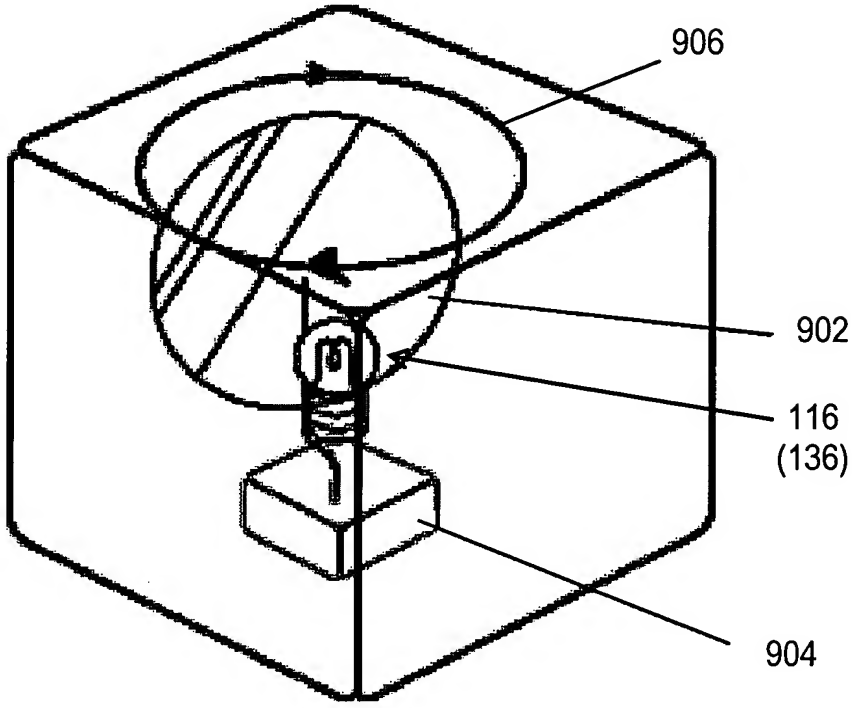


FIG. 10

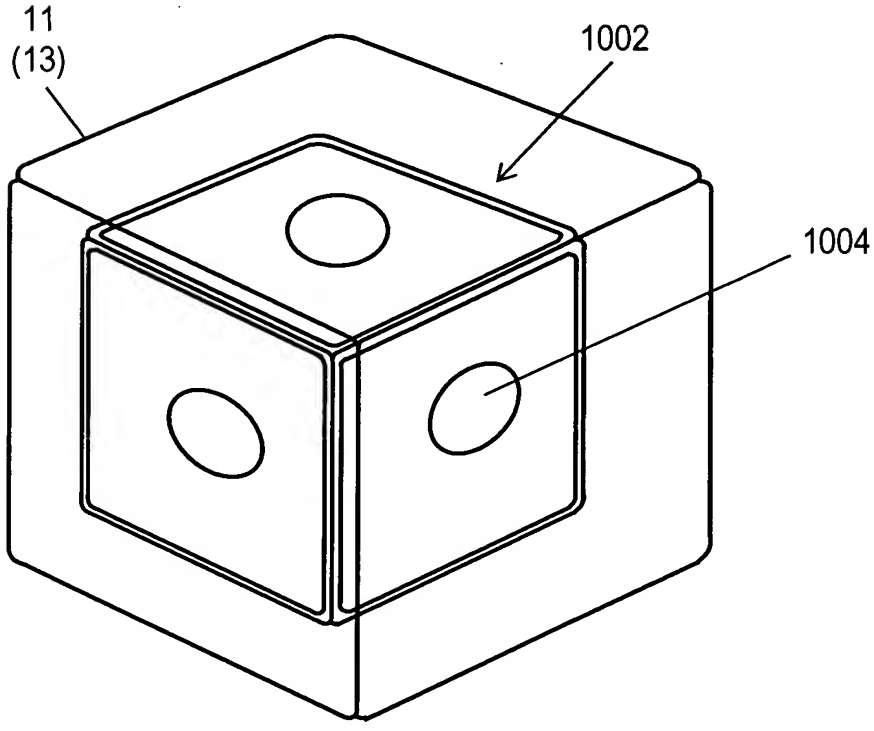


FIG. 11

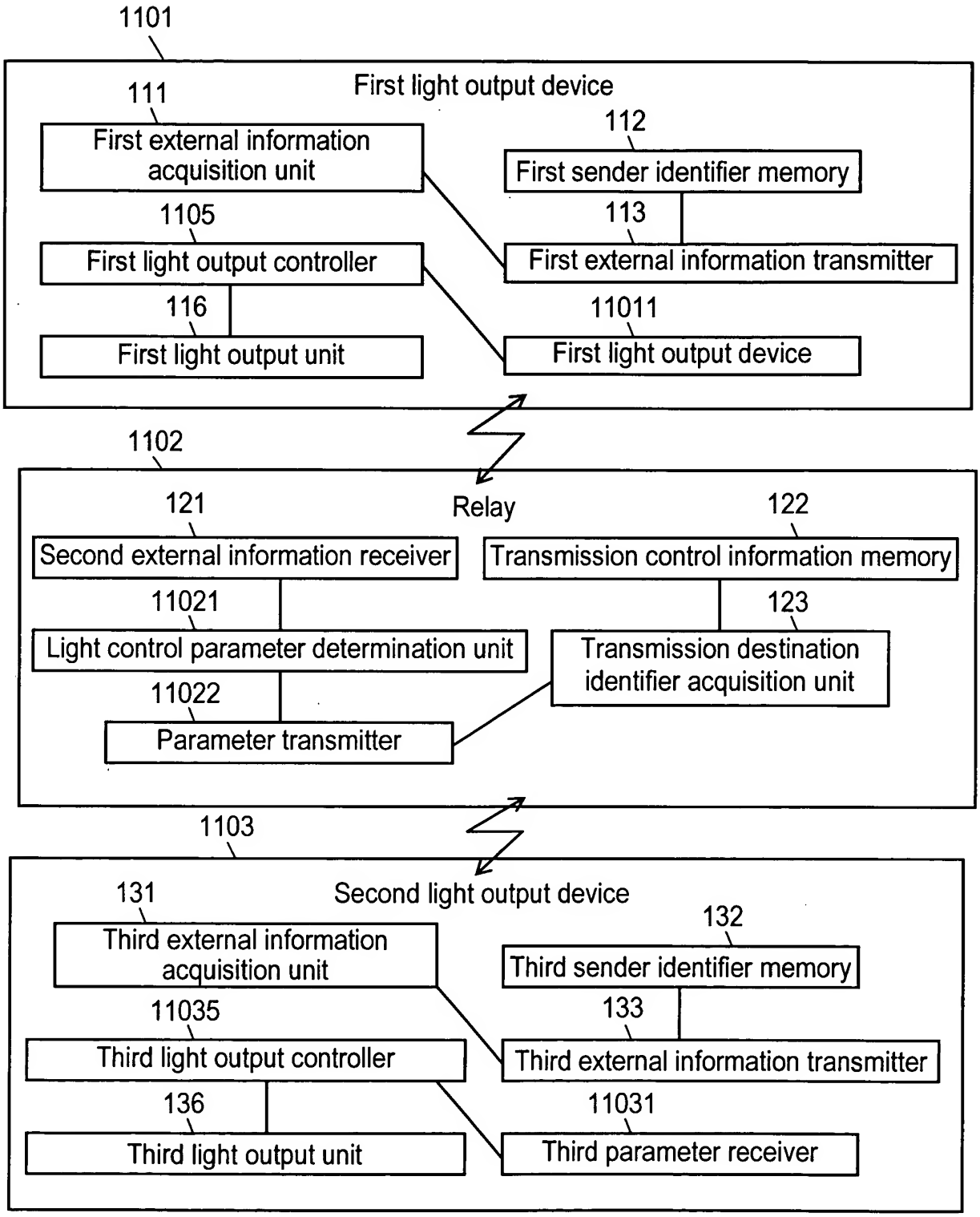

1101
First light output device
111
First external information acquisition unit
112
First sender identifier memory
1105
First light output controller
113
First external information transmitter
116
First light output unit
11011
First light output device
1102
Relay
121
Second external information receiver
122
Transmission control information memory
11021
Light control parameter determination unit
123
Transmission destination identifier acquisition unit
11022
Parameter transmitter
1103
Second light output device
131
Third external information acquisition unit
132
Third sender identifier memory
11035
Third light output controller
133
Third external information transmitter
136
Third light output unit
11031
Third parameter receiver

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FIG. 12

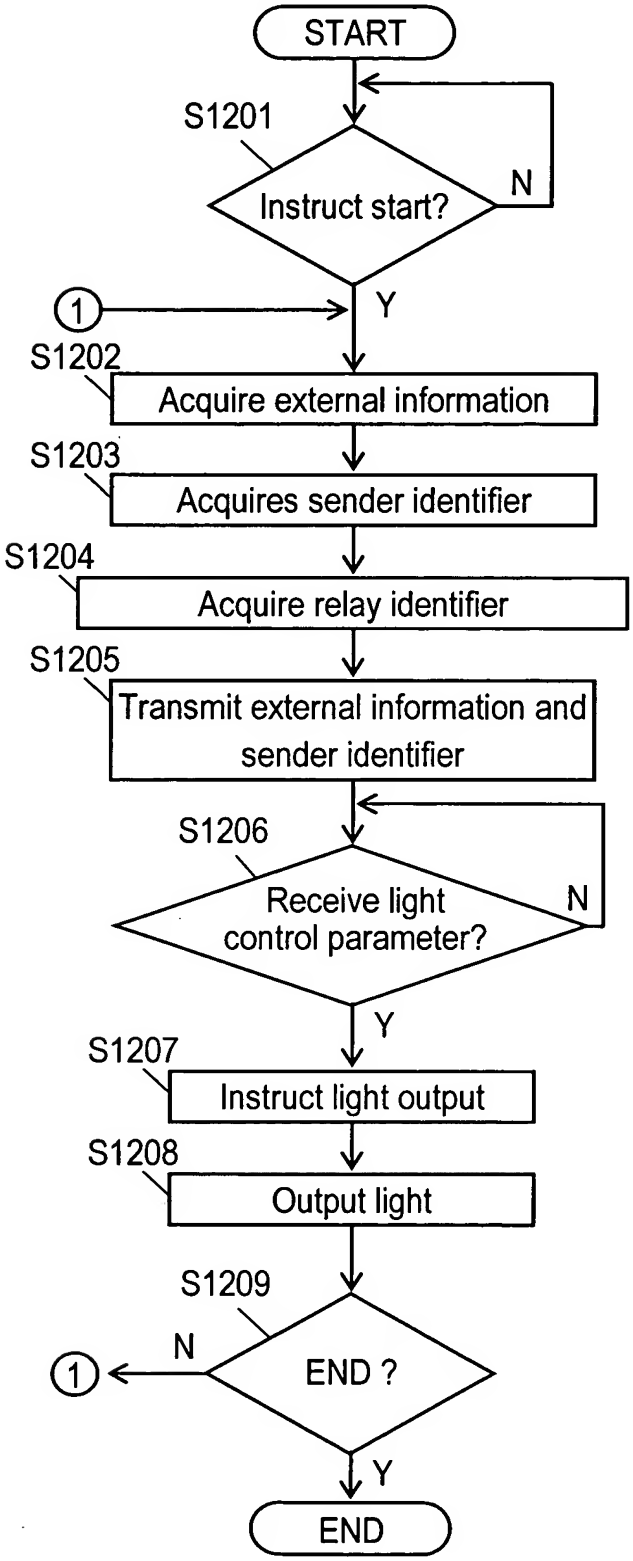

FIG. 13

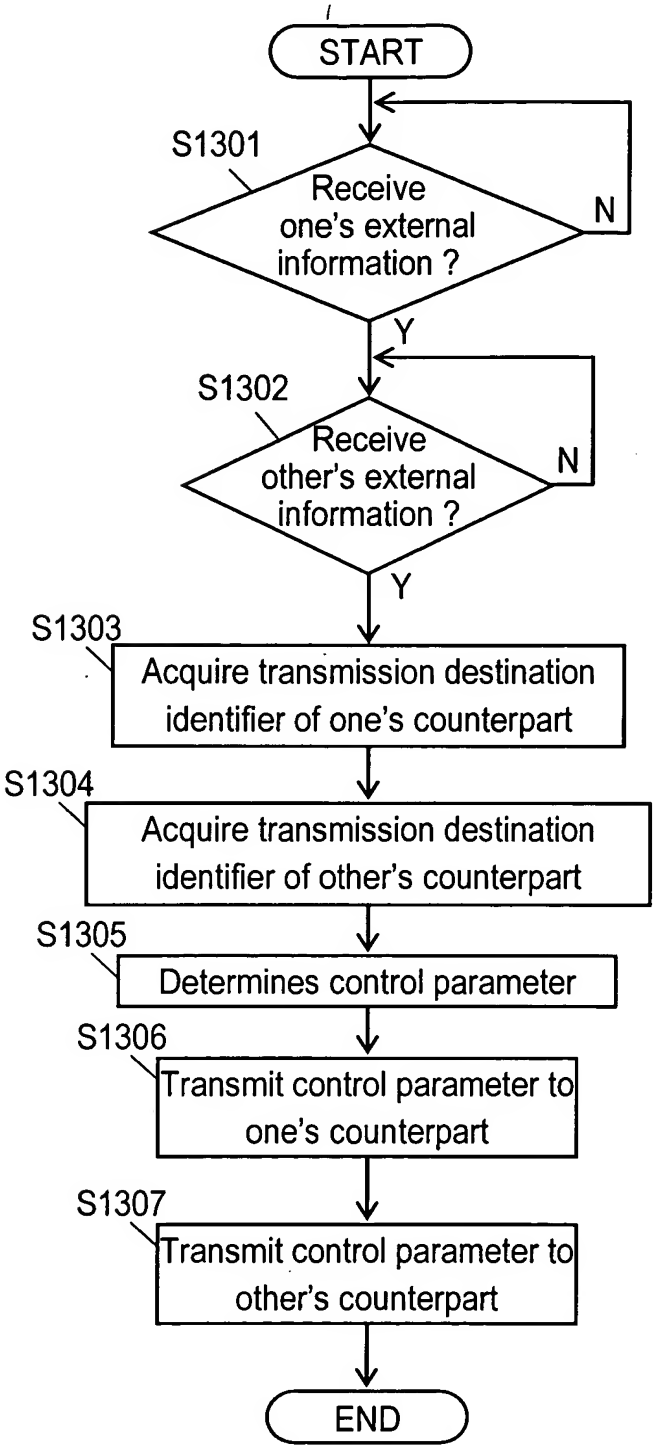
START
S1301
Receive one's external information ?
N
Y
S1302
Receive other's external information ?
N
Y
S1303
Acquire transmission destination identifier of one's counterpart
S1304
Acquire transmission destination identifier of other's counterpart
S1305
Determines control parameter
S1306
Transmit control parameter to one's counterpart
S1307
Transmit control parameter to other's counterpart
END

FIG. 14

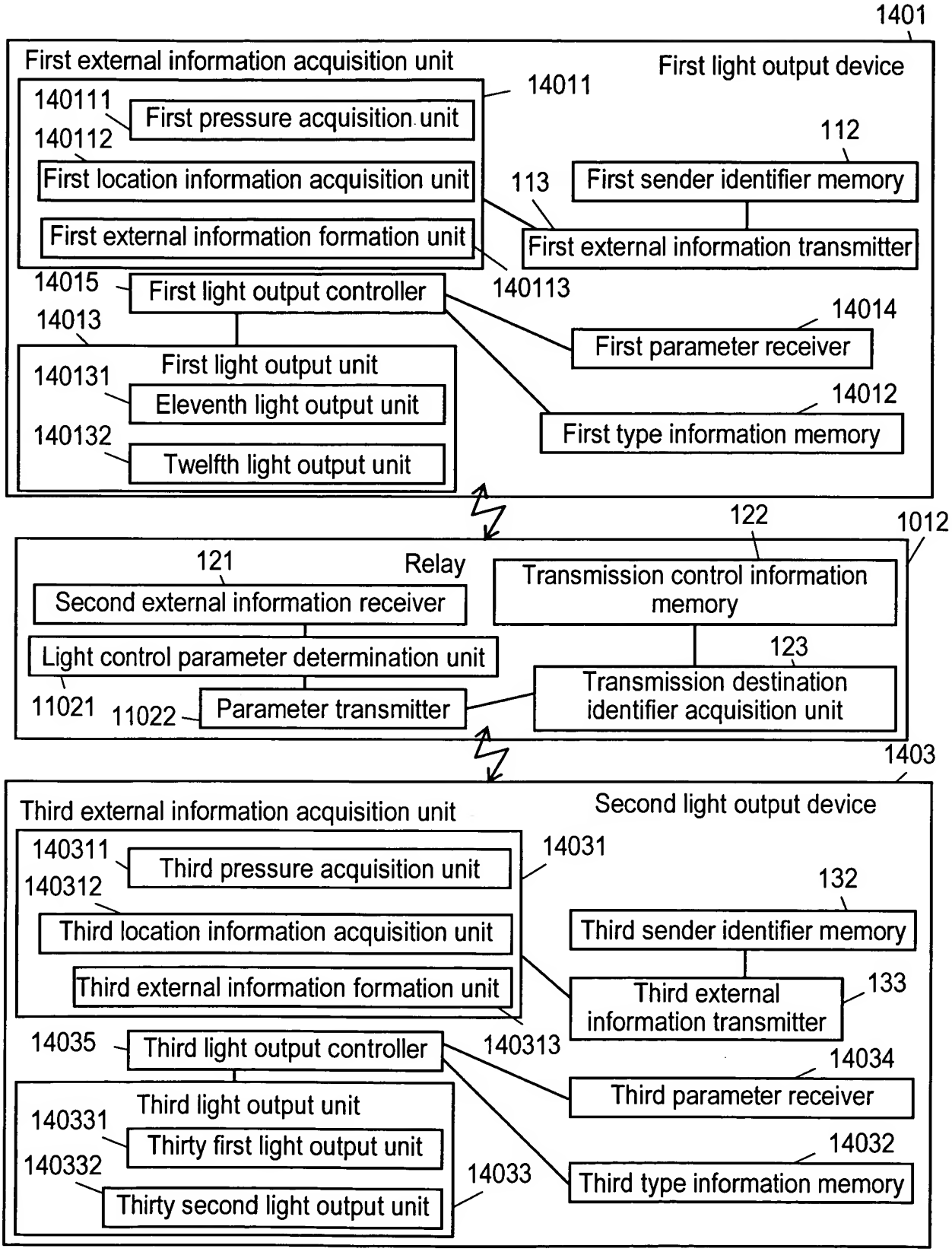
1401
First external information acquisition unit
First light output device
14011
140111
First pressure acquisition unit
140112
First location information acquisition unit
First external information formation unit
112
First sender identifier memory
113
First external information transmitter
140113
14015
First light output controller
14013
First light output unit
140131
Eleventh light output unit
140132
Twelfth light output unit
14014
First parameter receiver
14012
First type information memory
122
1012
121
Relay
Second external information receiver
Transmission control information memory
Light control parameter determination unit
123
11021
11022
Parameter transmitter
Transmission destination identifier acquisition unit
1403
Third external information acquisition unit
Second light output device
140311
Third pressure acquisition unit
14031
140312
Third location information acquisition unit
Third external information formation unit
132
Third sender identifier memory
Third external information transmitter
133
14035
Third light output controller
140313
14034
Third parameter receiver
Third light output unit
140331
Thirty first light output unit
140332
Thirty second light output unit
14033
14032
Third type information memory

FIG. 15

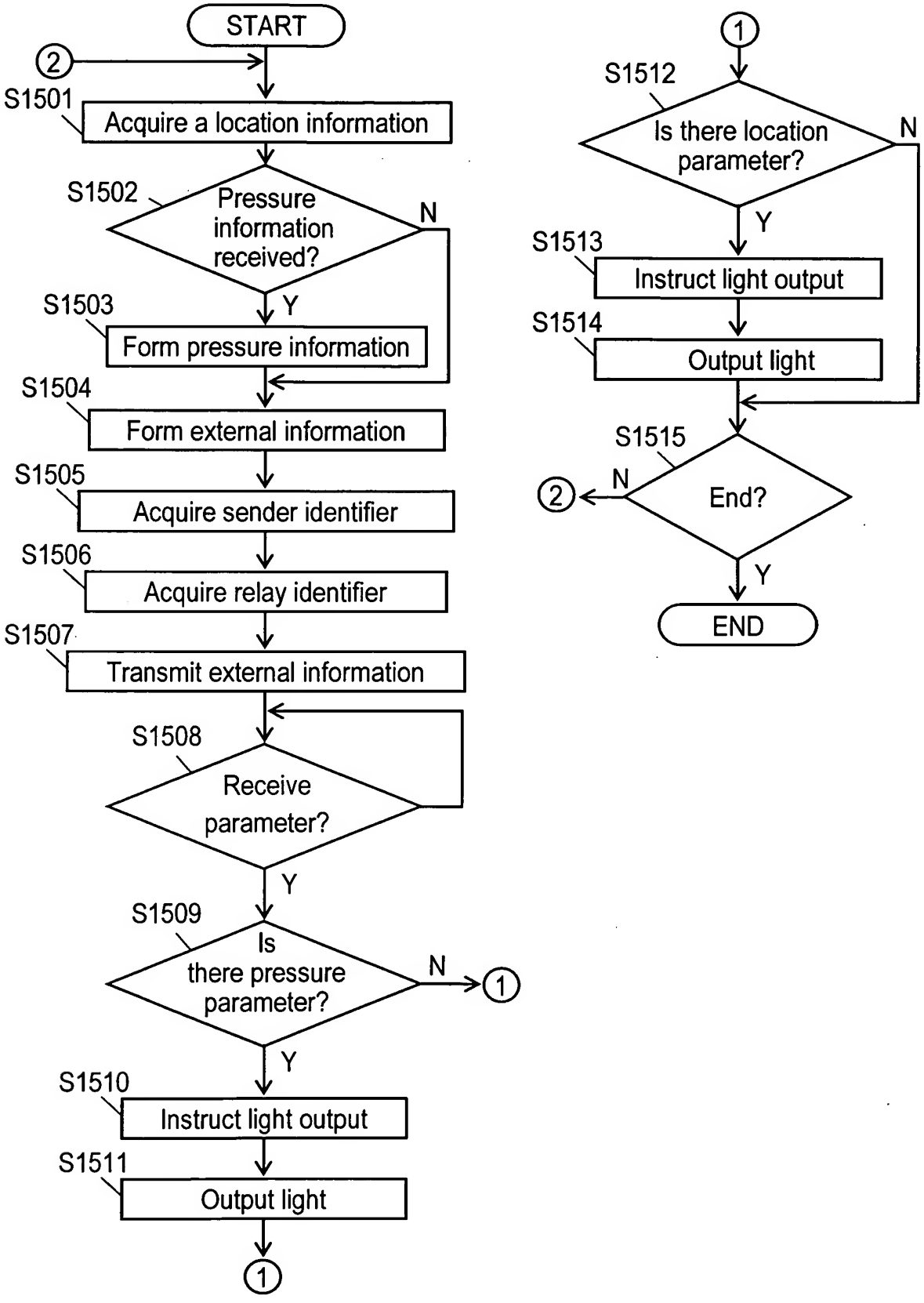
START
2
S1501
Acquire a location information
S1502
Pressure information received?
N
Y
S1503
Form pressure information
S1504
Form external information
S1505
Acquire sender identifier
S1506
Acquire relay identifier
S1507
Transmit external information
S1508
Receive parameter?
Y
S1509
Is there pressure parameter?
N
1
Y
S1510
Instruct light output
S1511
Output light
1
1
S1512
Is there location parameter?
N
Y
S1513
Instruct light output
S1514
Output light
S1515
End?
N
2
Y
END

FIG. 16

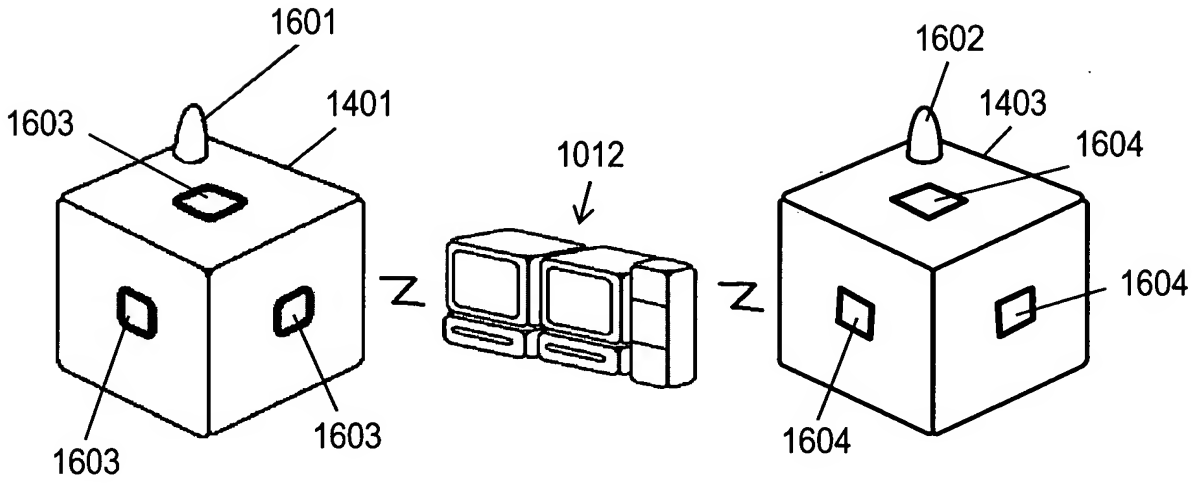

FIG. 17

Pressure information

Value of sensor 1	Value of sensor 2	.....	Value of sensor 6

FIG. 18

Pressure information	0	0	20	5	5	20

FIG. 19

	X(Latitude)	Y(Longitude)	Z(altitude)
Location information	136	110	5

FIG. 20

Type information	ID	value information
Location information	2	(136,110,5)
Pressure information	1	12.5

FIG. 21

Type information	ID	value information
Pressure information	1	5
Location information	2	(136,109,0)

FIG. 22

Voltage	Distance between two devices (km)
20	0~1
15	1.1~5
10	5.1~10
5	10.1~20
0	20.1~

FIG. 23

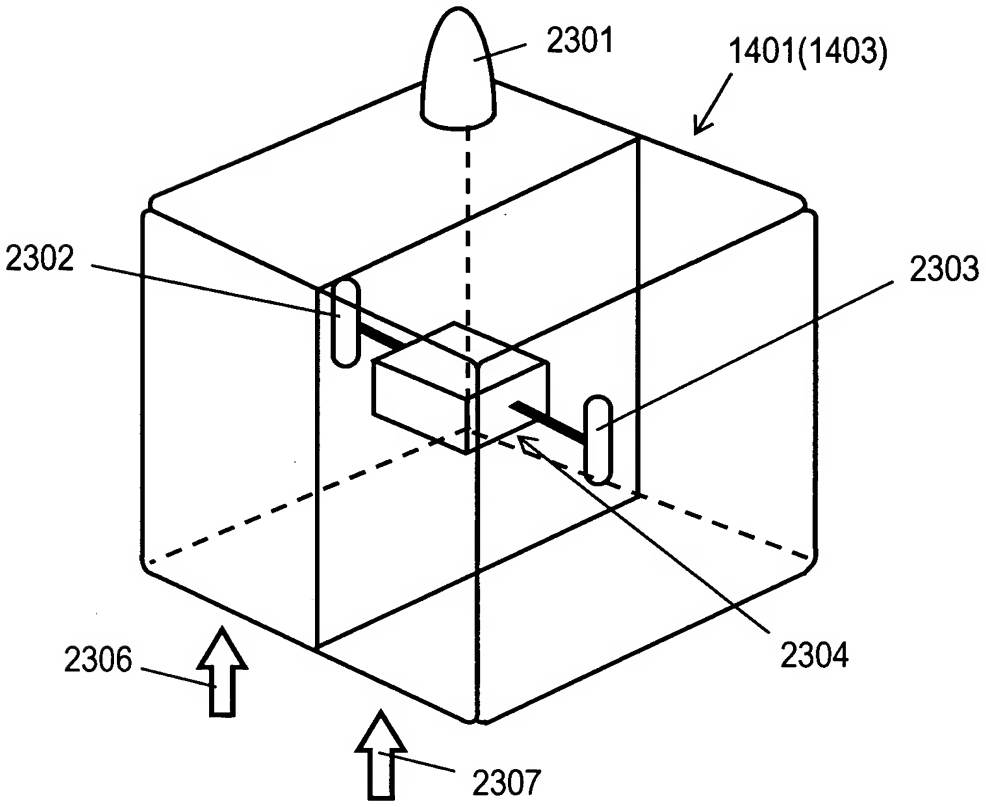

FIG. 24

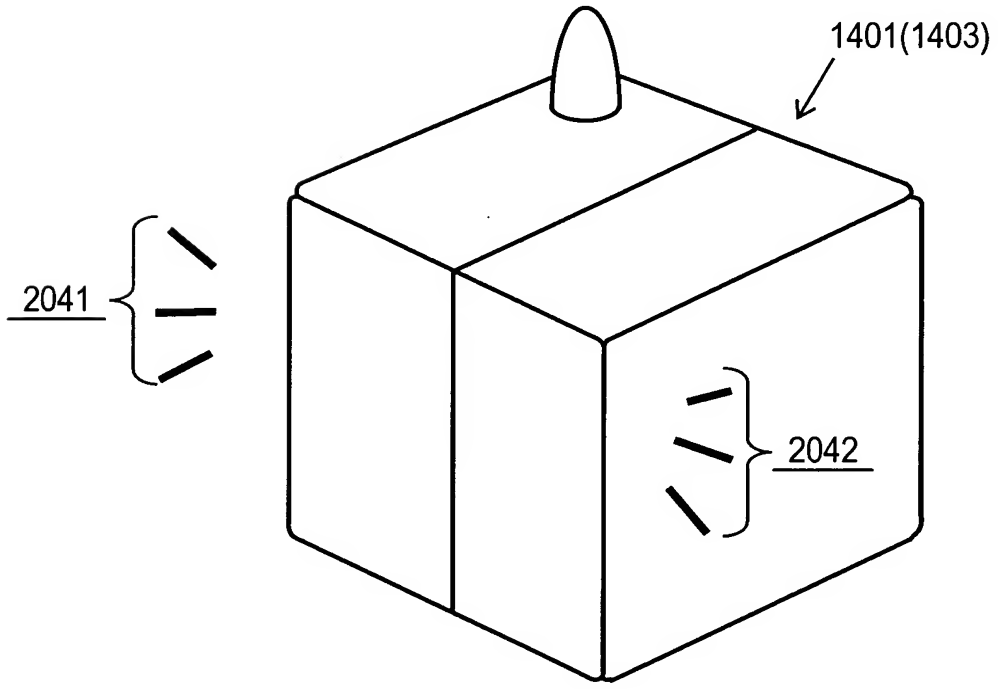

FIG. 25

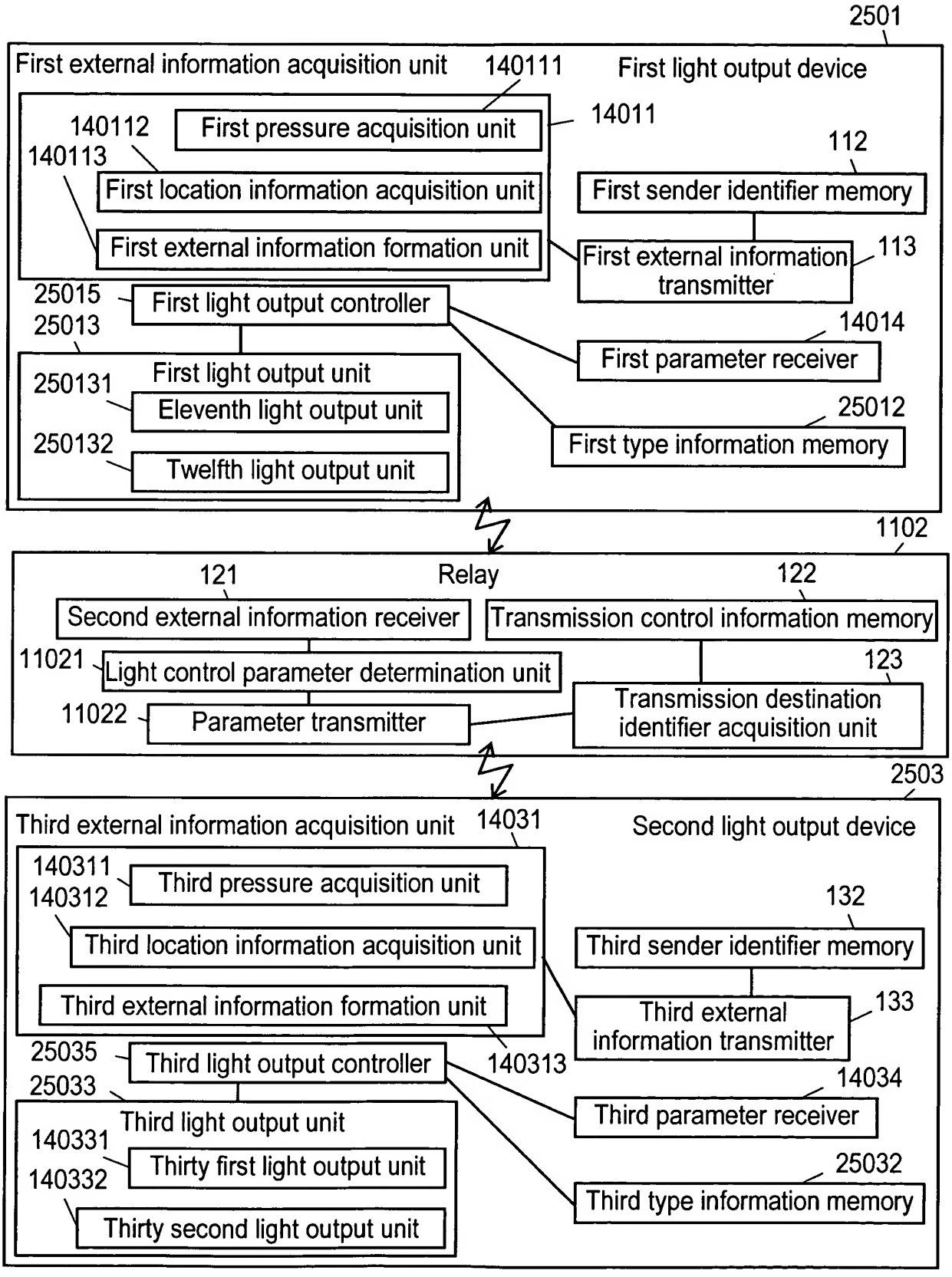
2501
First external information acquisition unit
140111
First light output device
140112
First pressure acquisition unit
14011
140113
112
First location information acquisition unit
First sender identifier memory
First external information formation unit
First external information transmitter
113
25015
First light output controller
25013
14014
First parameter receiver
First light output unit
250131
Eleventh light output unit
25012
First type information memory
250132
Twelfth light output unit
1102
121
Relay
122
Second external information receiver
Transmission control information memory
11021
Light control parameter determination unit
123
Transmission destination identifier acquisition unit
11022
Parameter transmitter
2503
Third external information acquisition unit
14031
Second light output device
140311
Third pressure acquisition unit
140312
132
Third location information acquisition unit
Third sender identifier memory
Third external information formation unit
Third external information transmitter
133
25035
Third light output controller
140313
25033
14034
Third parameter receiver
Third light output unit
140331
Thirty first light output unit
25032
140332
Third type information memory
Thirty second light output unit

FIG. 26

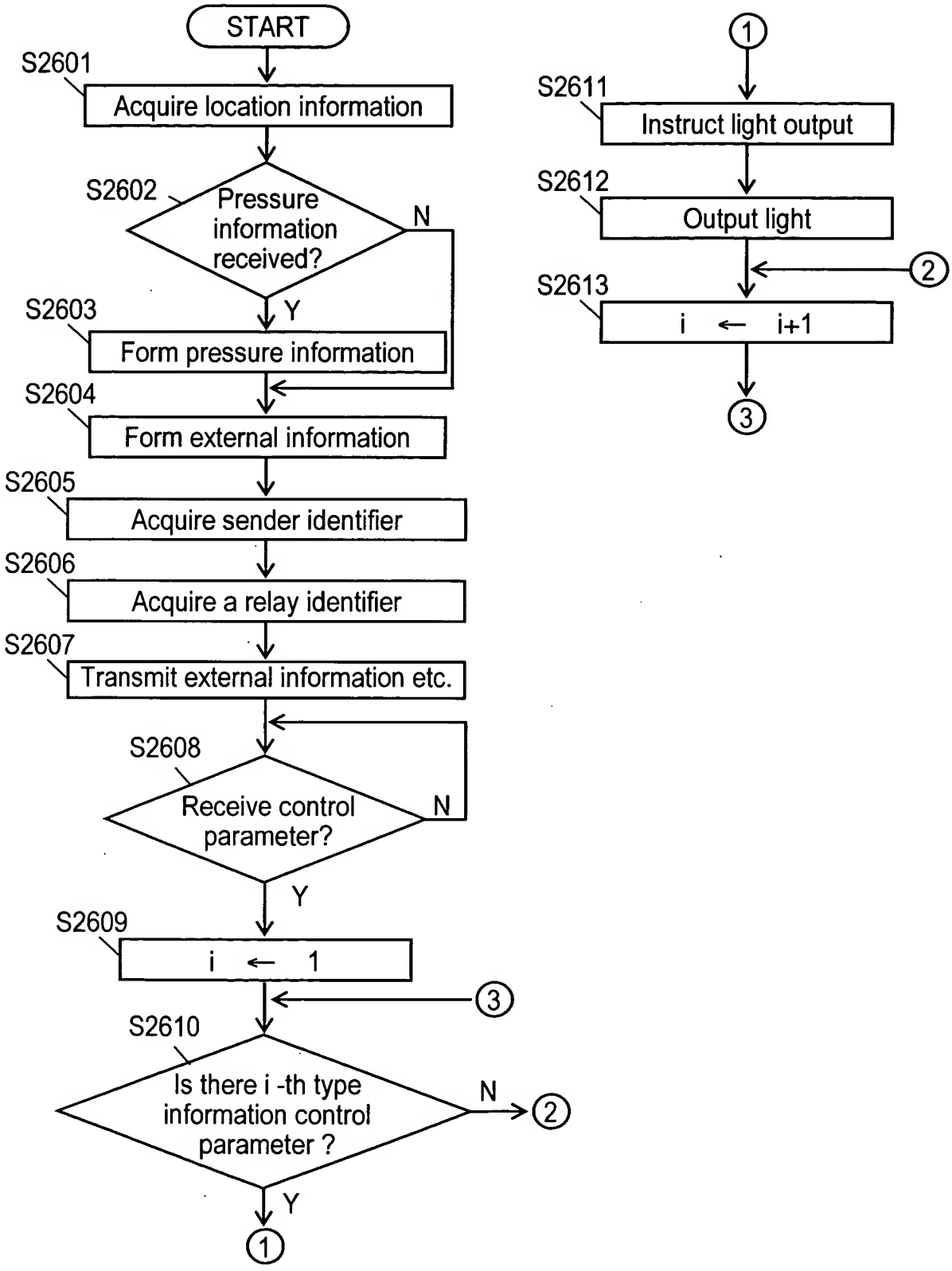
START
S2601
Acquire location information
S2602
Pressure information received?
N
Y
S2603
Form pressure information
S2604
Form external information
S2605
Acquire sender identifier
S2606
Acquire a relay identifier
S2607
Transmit external information etc.
S2608
Receive control parameter?
N
Y
S2609
i ← 1
3
S2610
Is there i -th type information control parameter ?
N
2
Y
1
1
S2611
Instruct light output
S2612
Output light
2
S2613
i ← i+1
3

FIG. 27

Light output unit identifier	Type information	Light output method identifier
First light output unit	Pressure information	Light ON/OFF
Second light output unit	Position information	Light rotation

FIG. 28

Light output method identifier
Light intensity
Light color
Light ON/OFF
Light rotation
Light source size

FIG. 29

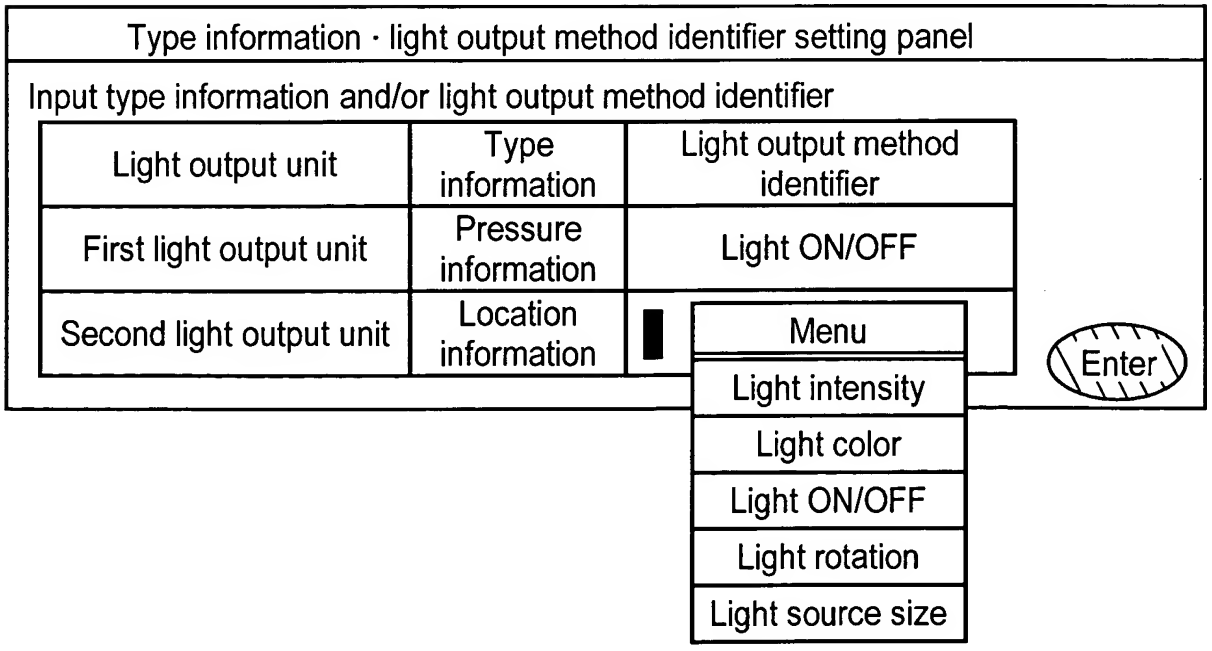

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FIG. 30

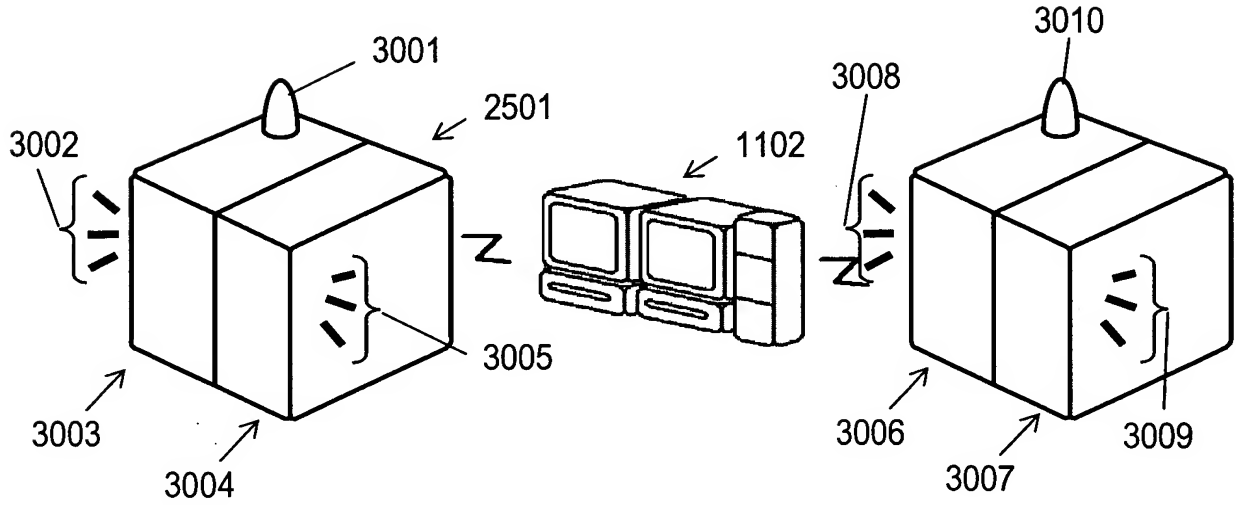

FIG. 31

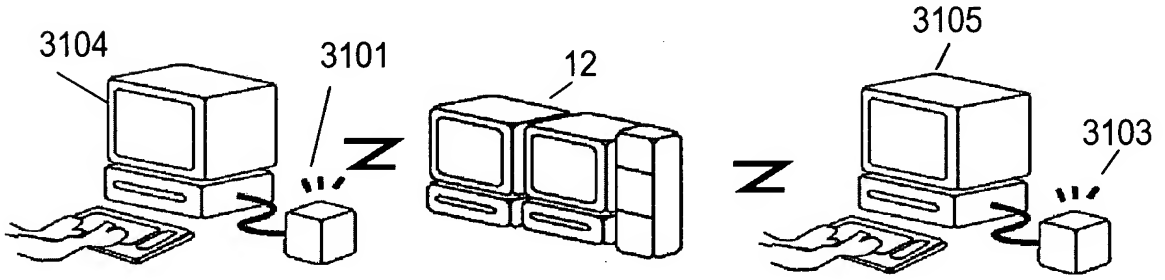

FIG. 32

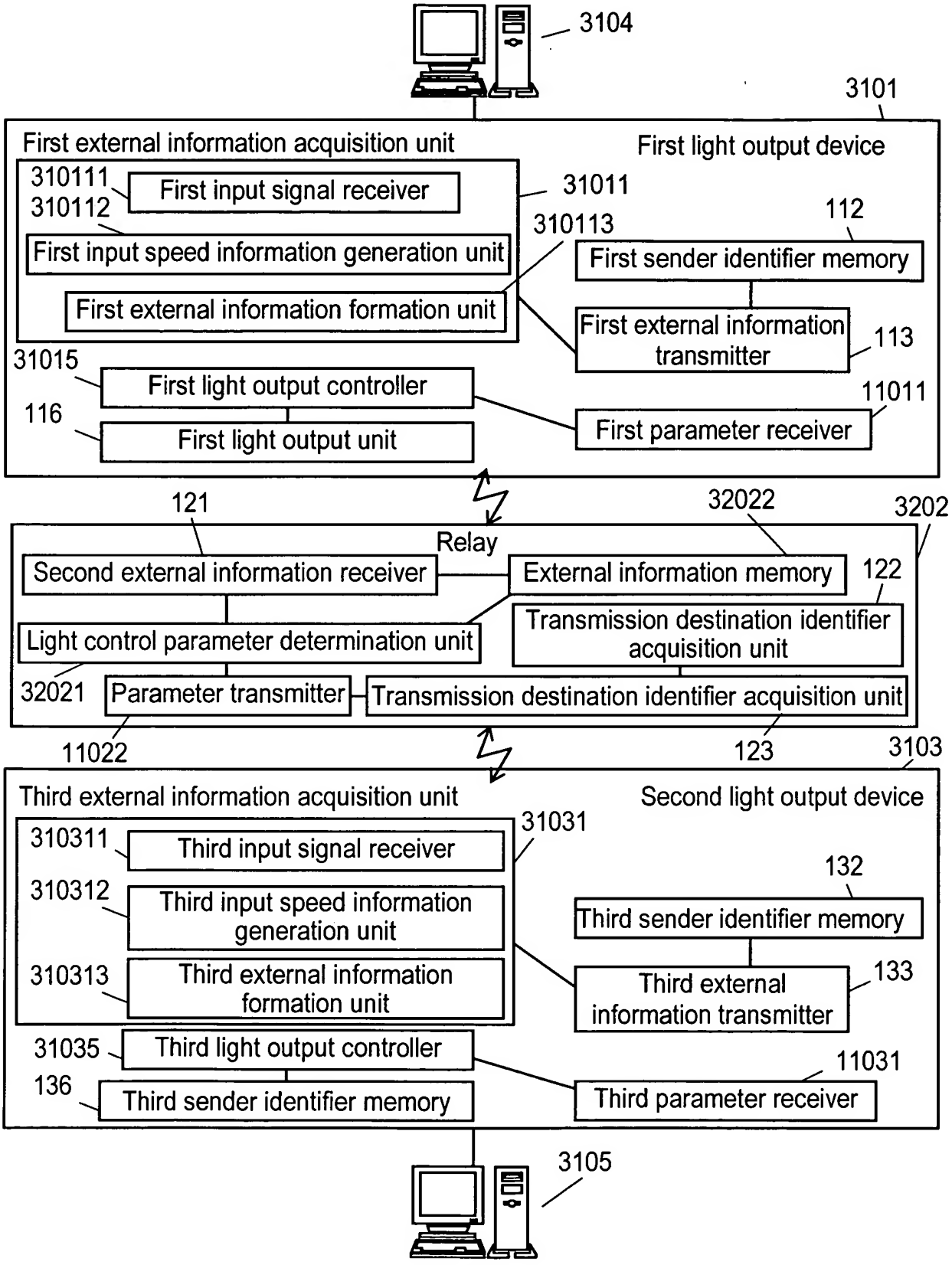
3104
3101
First external information acquisition unit
First light output device
310111
310112
First input signal receiver
31011
First input speed information generation unit
310113
112
First sender identifier memory
First external information formation unit
First external information transmitter
113
31015
First light output controller
11011
116
First light output unit
First parameter receiver
121
32022
3202
Relay
Second external information receiver
External information memory
122
Light control parameter determination unit
Transmission destination identifier acquisition unit
32021
Parameter transmitter
Transmission destination identifier acquisition unit
11022
123
3103
Third external information acquisition unit
Second light output device
310311
Third input signal receiver
31031
132
310312
Third input speed information generation unit
Third sender identifier memory
310313
Third external information formation unit
Third external information transmitter
133
31035
Third light output controller
11031
136
Third sender identifier memory
Third parameter receiver
3105

FIG. 33

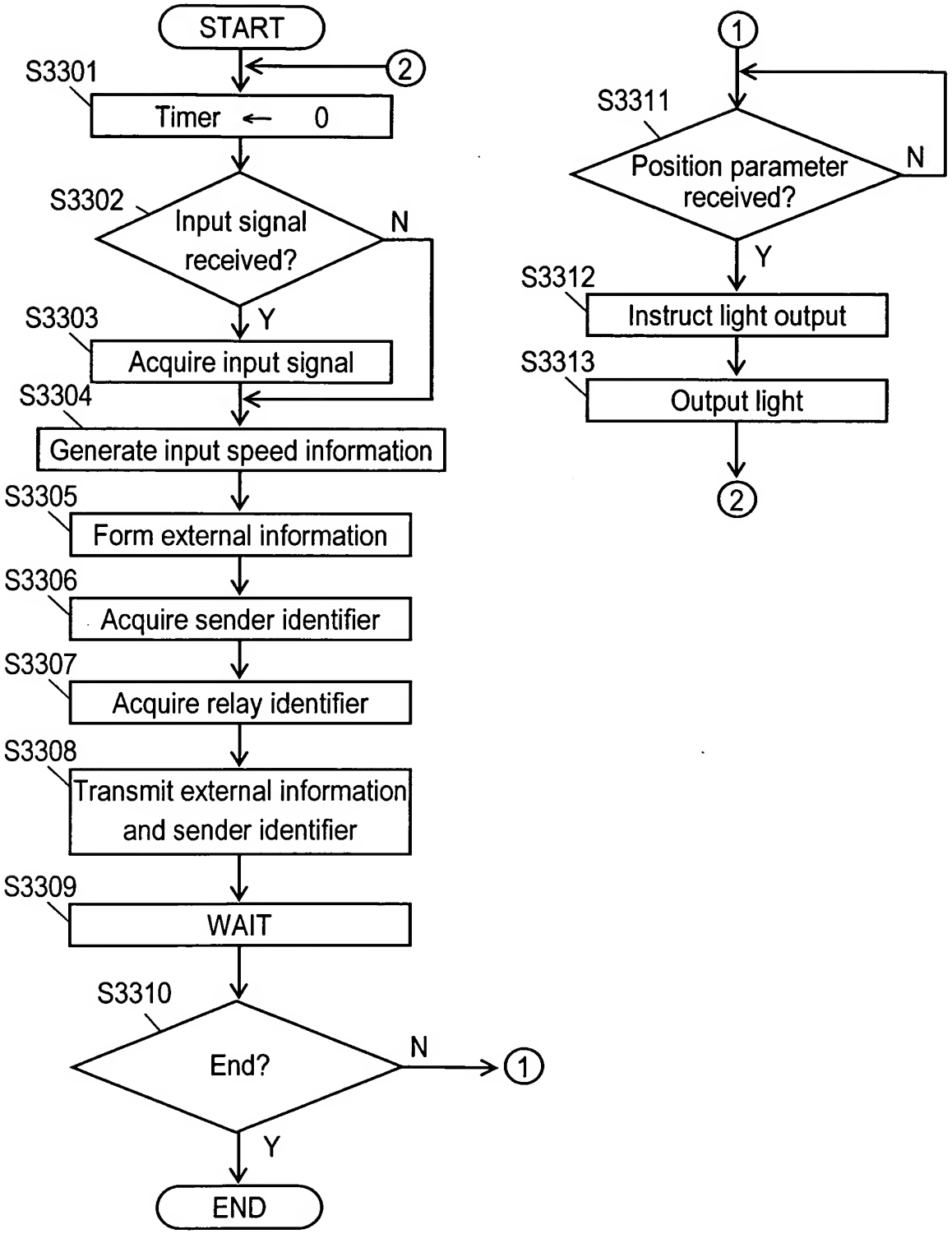
START
S3301
Timer ← 0
S3302
Input signal received?
N
Y
S3303
Acquire input signal
S3304
Generate input speed information
S3305
Form external information
S3306
Acquire sender identifier
S3307
Acquire relay identifier
S3308
Transmit external information and sender identifier
S3309
WAIT
S3310
End?
N
Y
END
1
2
S3311
Position parameter received?
N
Y
S3312
Instruct light output
S3313
Output light
1
2

FIG. 34

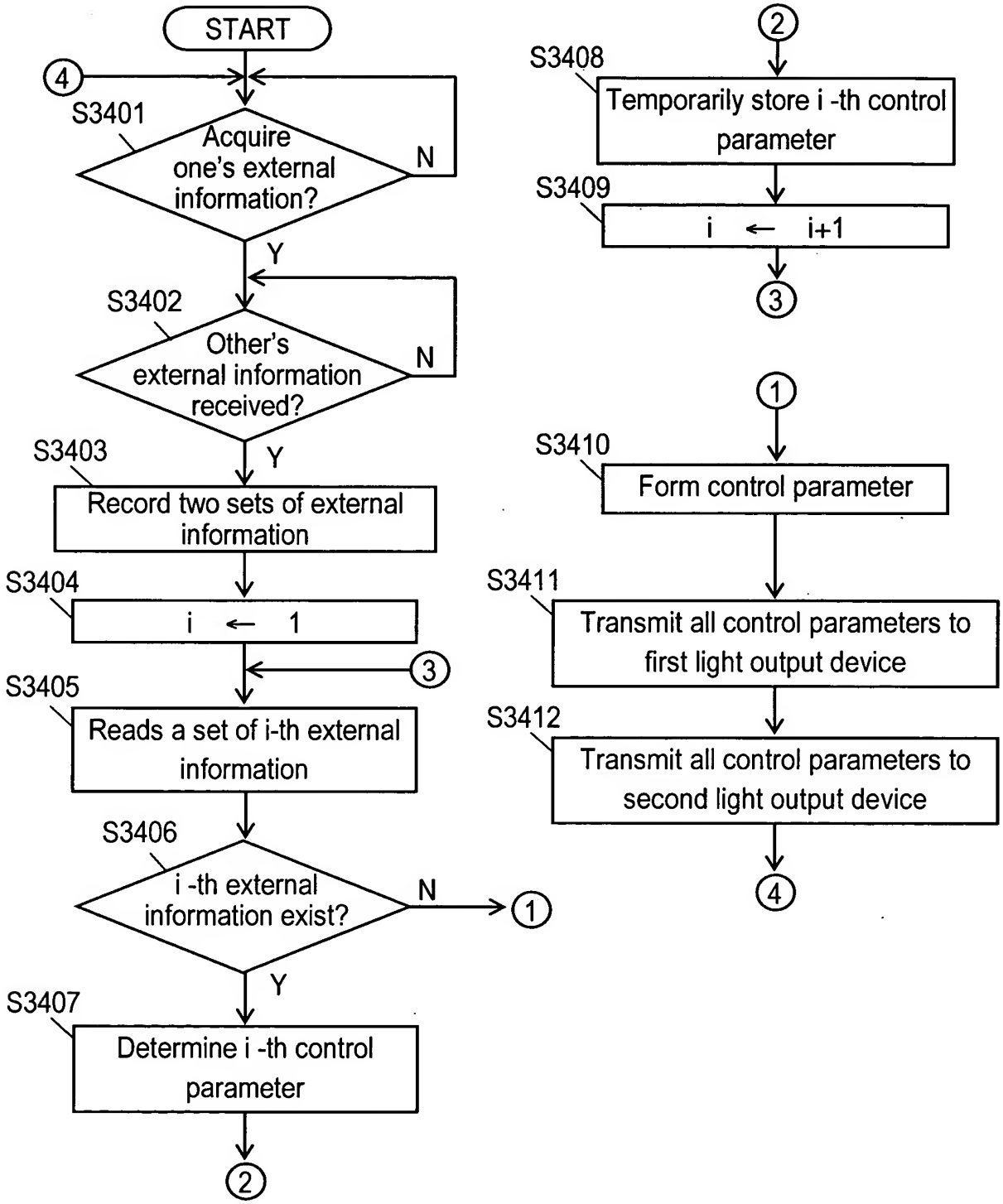
START
4
S3401
Acquire one's external information?
N
Y
S3402
Other's external information received?
N
Y
S3403
Record two sets of external information
S3404
i ← 1
3
S3405
Reads a set of i-th external information
S3406
i -th external information exist?
N
1
Y
S3407
Determine i -th control parameter
2
2
S3408
Temporarily store i -th control parameter
S3409
i ← i+1
3
1
S3410
Form control parameter
S3411
Transmit all control parameters to first light output device
S3412
Transmit all control parameters to second light output device
4

FIG. 35

Time	External information from first light output device	External information from second light output device
9:00	134	133
9:05	190	180
9:10	480	70
⋮	⋮	⋮

FIG. 36

Difference of two sets of external information	Light control parameter
Not less than 200	0
100~199	5
50~99	10
10~49	15
0~9	20

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FIG. 37

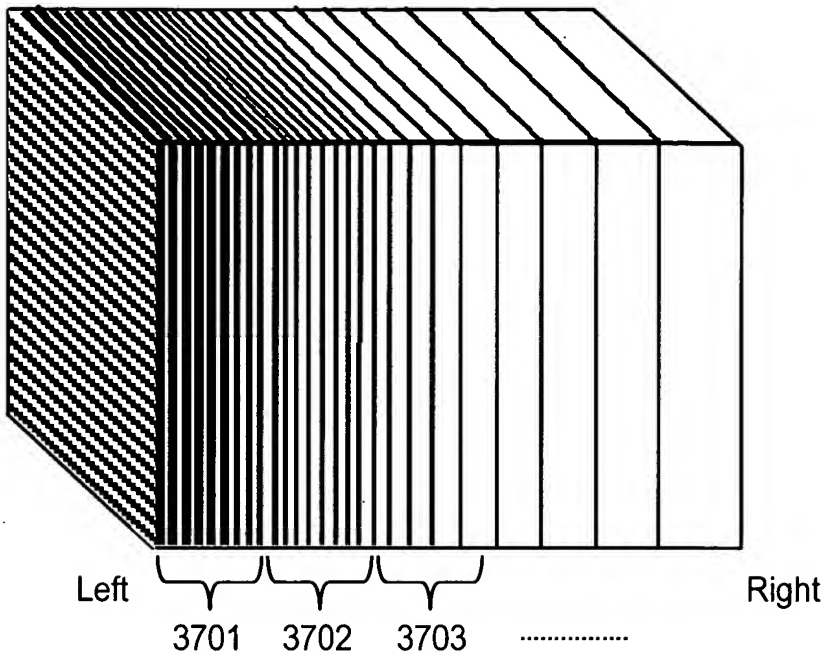

FIG. 38

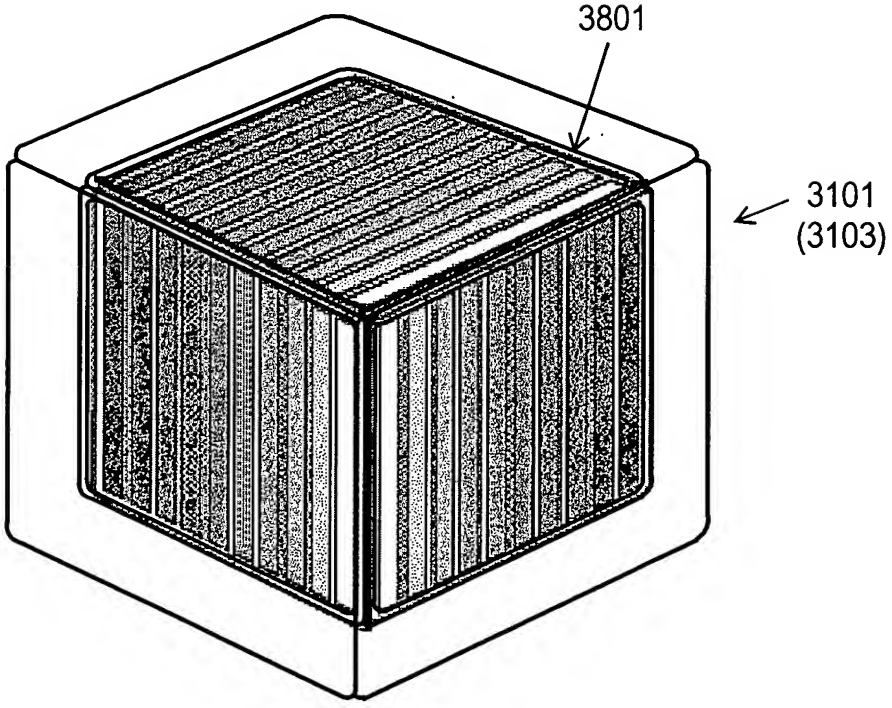

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FIG. 39

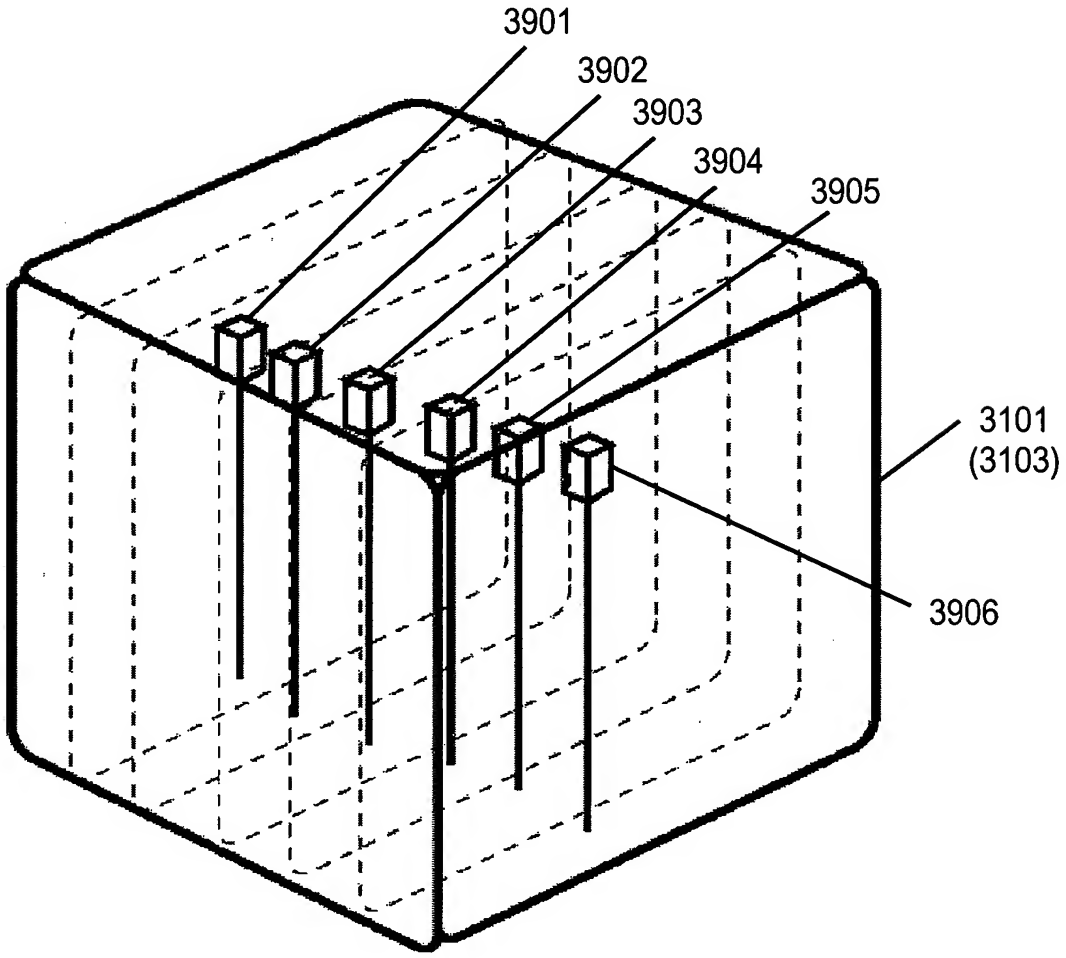

FIG. 40

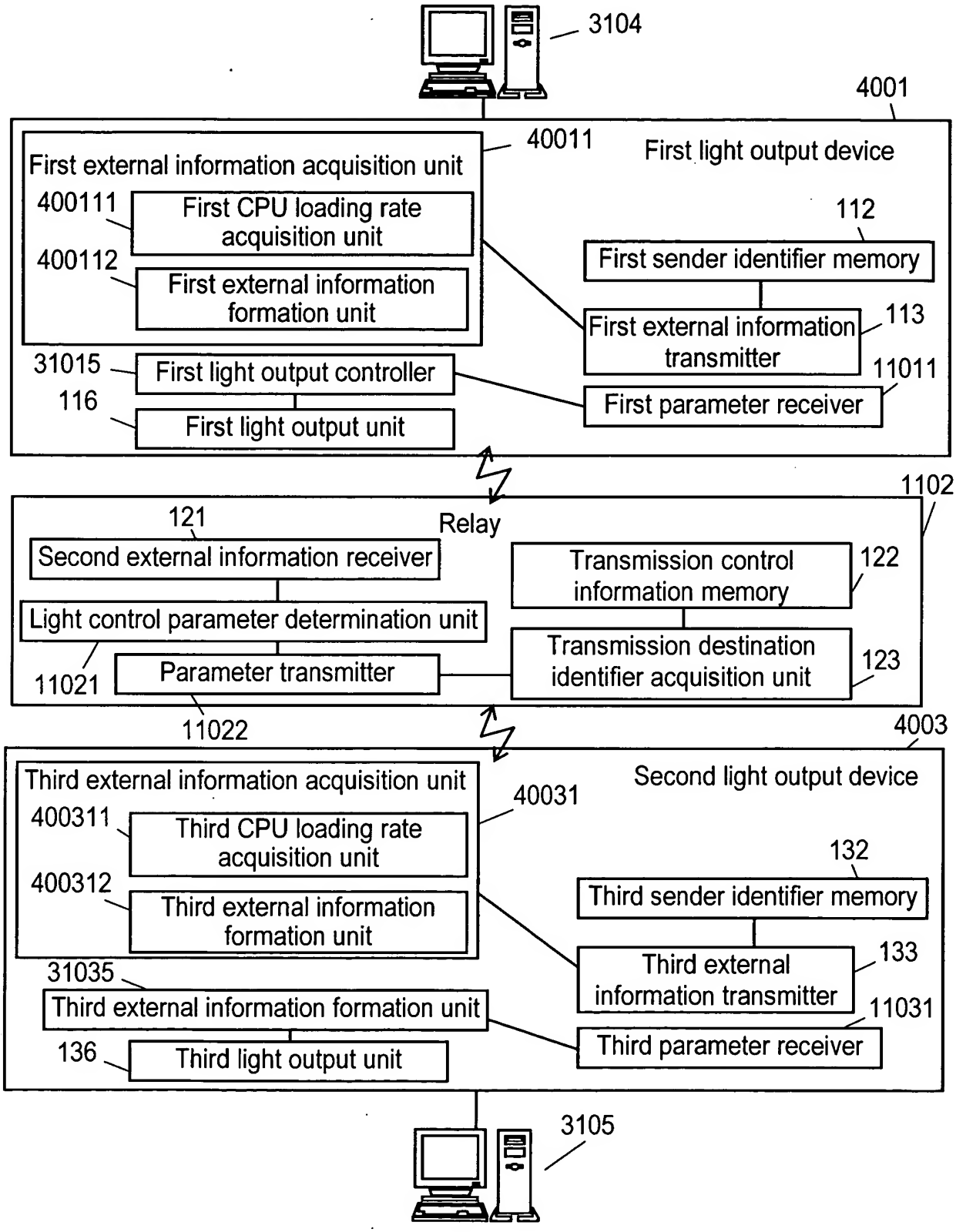
3104
4001
40011
First external information acquisition unit
400111
First CPU loading rate acquisition unit
400112
First external information formation unit
First light output device
112
First sender identifier memory
First external information transmitter
113
31015
First light output controller
116
First light output unit
11011
First parameter receiver
1102
Relay
121
Second external information receiver
Light control parameter determination unit
11021
Parameter transmitter
Transmission control information memory
122
Transmission destination identifier acquisition unit
123
11022
4003
Third external information acquisition unit
40031
400311
Third CPU loading rate acquisition unit
400312
Third external information formation unit
Second light output device
132
Third sender identifier memory
Third external information transmitter
133
31035
Third external information formation unit
136
Third light output unit
11031
Third parameter receiver
3105

FIG. 41

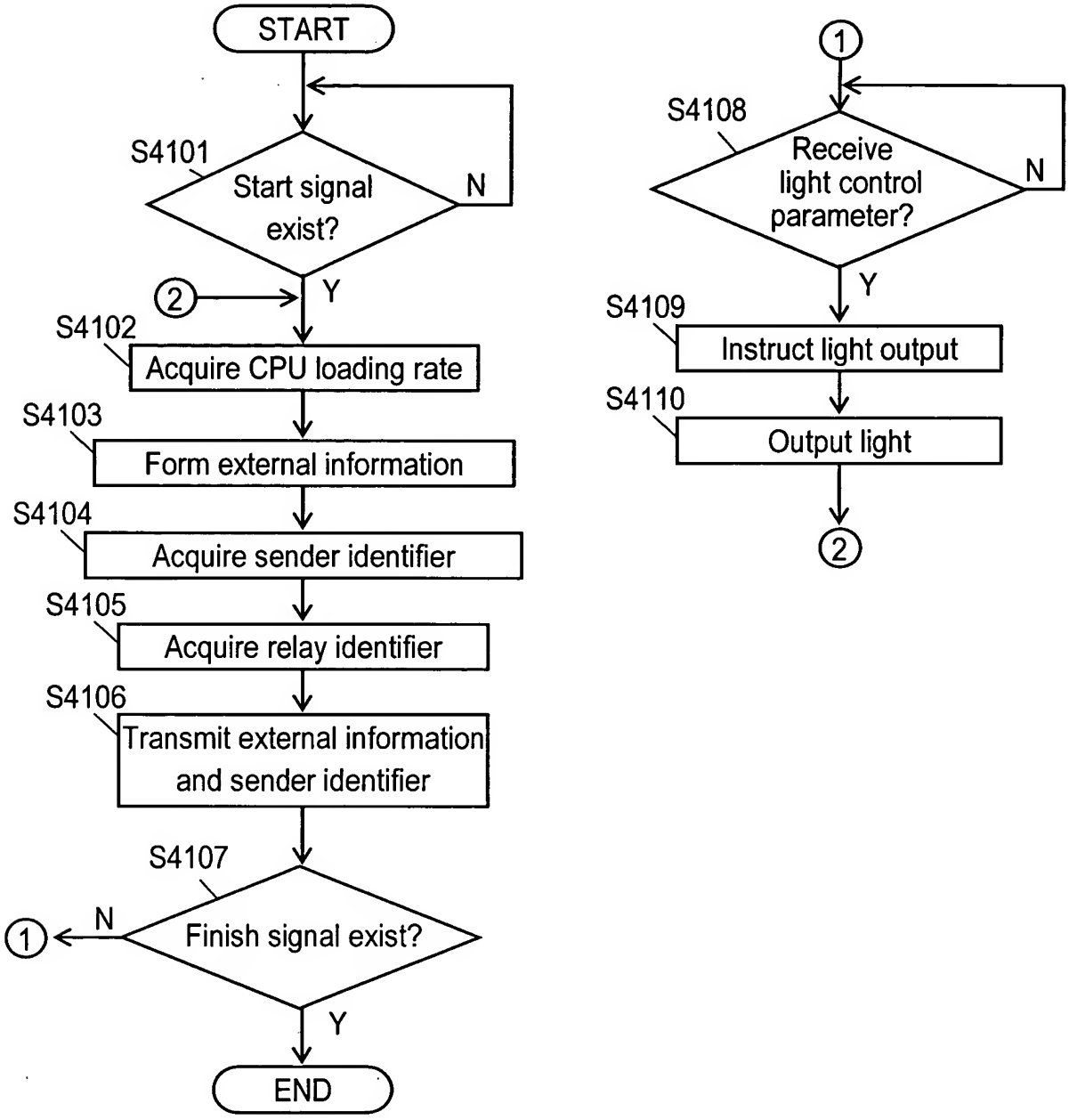
START
S4101
Start signal exist?
N
Y
2
S4102
Acquire CPU loading rate
S4103
Form external information
S4104
Acquire sender identifier
S4105
Acquire relay identifier
S4106
Transmit external information and sender identifier
S4107
Finish signal exist?
N
1
Y
END
1
S4108
Receive light control parameter?
N
Y
S4109
Instruct light output
S4110
Output light
2

FIG. 42

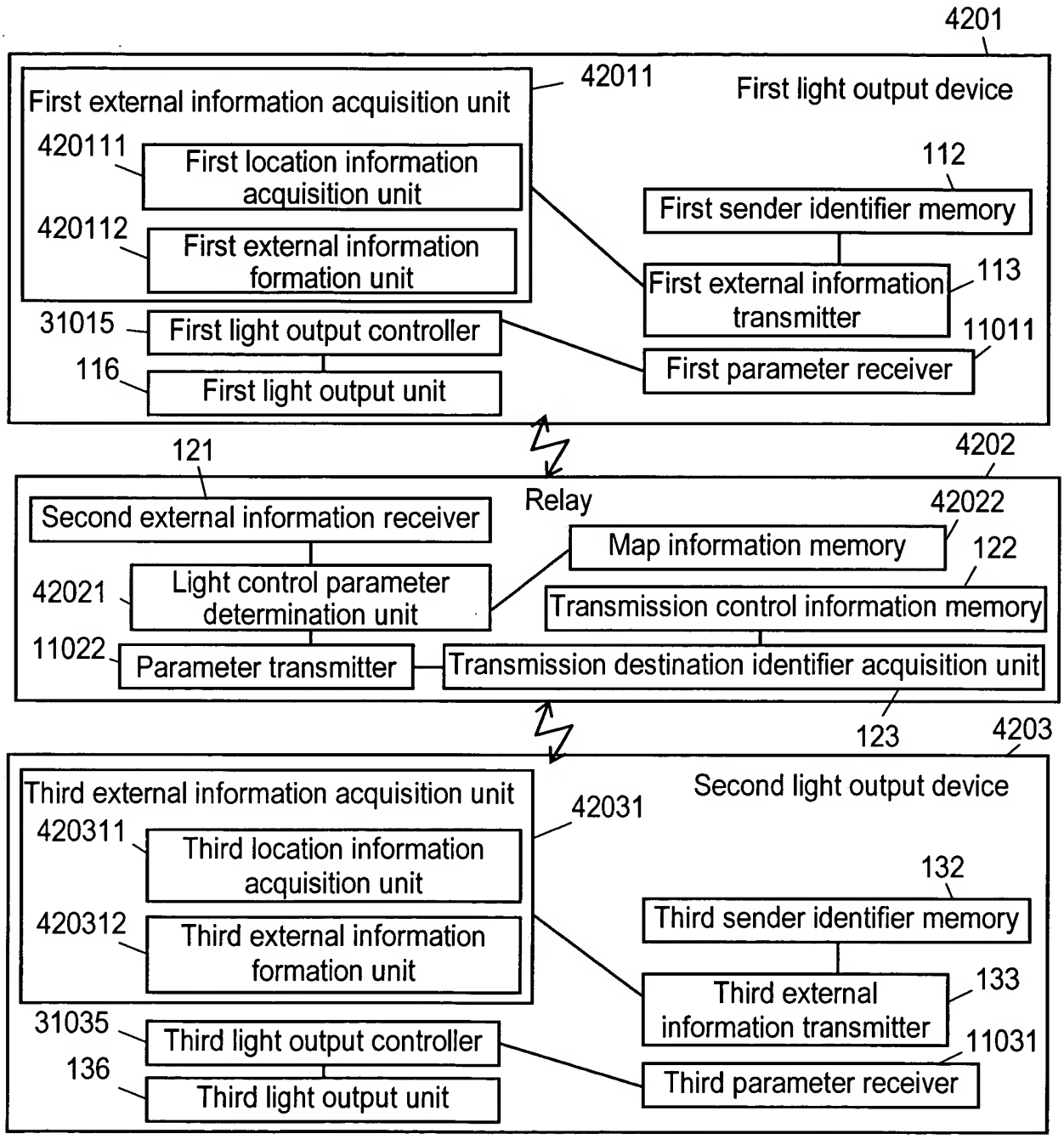
4201
First light output device
First external information acquisition unit
42011
420111
First location information acquisition unit
420112
First external information formation unit
31015
First light output controller
116
First light output unit
112
First sender identifier memory
First external information transmitter
113
11011
First parameter receiver
121
Second external information receiver
Relay
4202
42022
Map information memory
122
42021
Light control parameter determination unit
Transmission control information memory
11022
Parameter transmitter
Transmission destination identifier acquisition unit
123
4203
Second light output device
Third external information acquisition unit
42031
420311
Third location information acquisition unit
420312
Third external information formation unit
31035
Third light output controller
136
Third light output unit
132
Third sender identifier memory
Third external information transmitter
133
11031
Third parameter receiver

FIG. 43

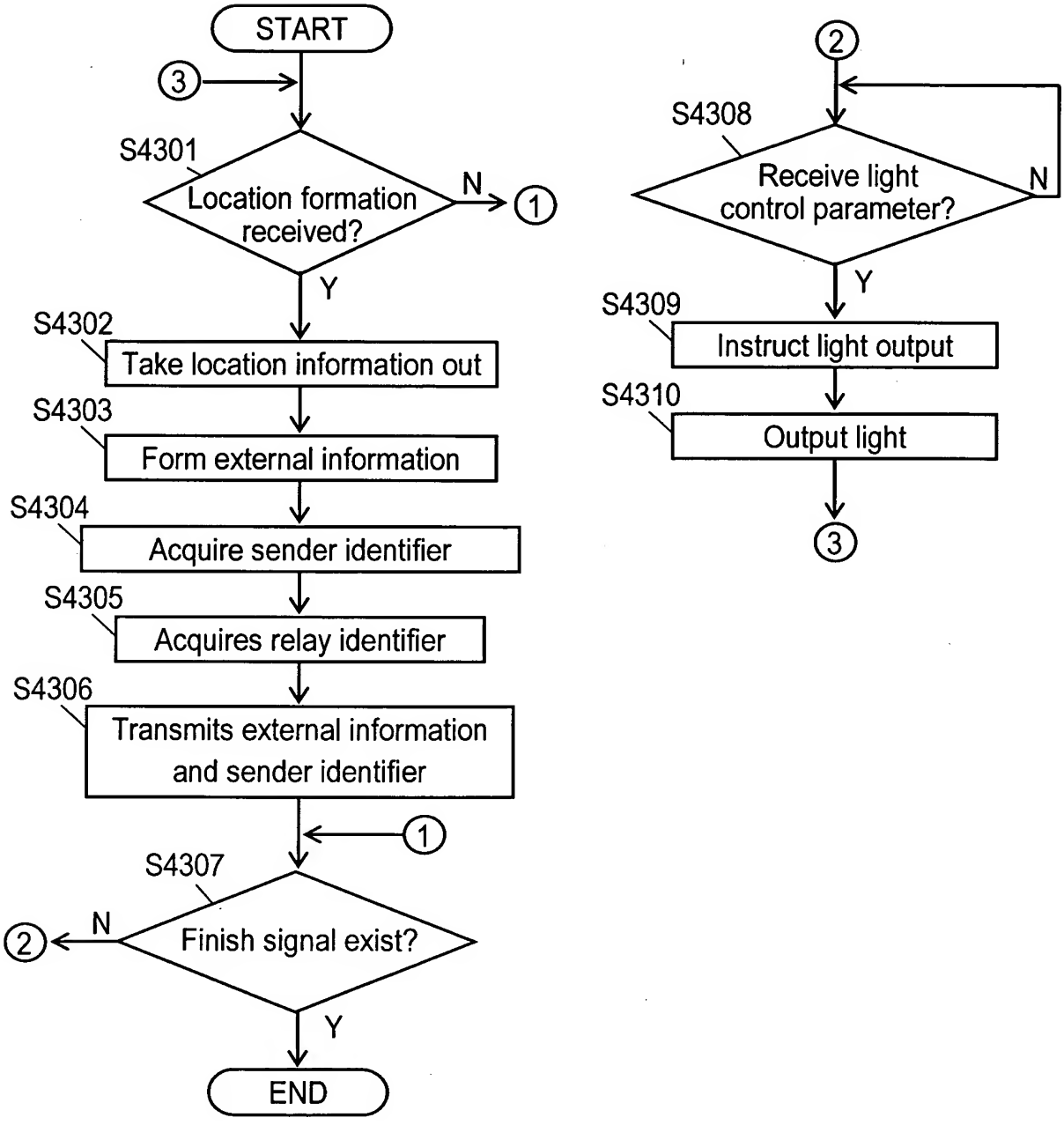
START
3
S4301
Location formation received?
N
1
Y
S4302
Take location information out
S4303
Form external information
S4304
Acquire sender identifier
S4305
Acquires relay identifier
S4306
Transmits external information and sender identifier
1
S4307
Finish signal exist?
N
2
Y
END
2
S4308
Receive light control parameter?
N
Y
S4309
Instruct light output
S4310
Output light
3

FIG. 44

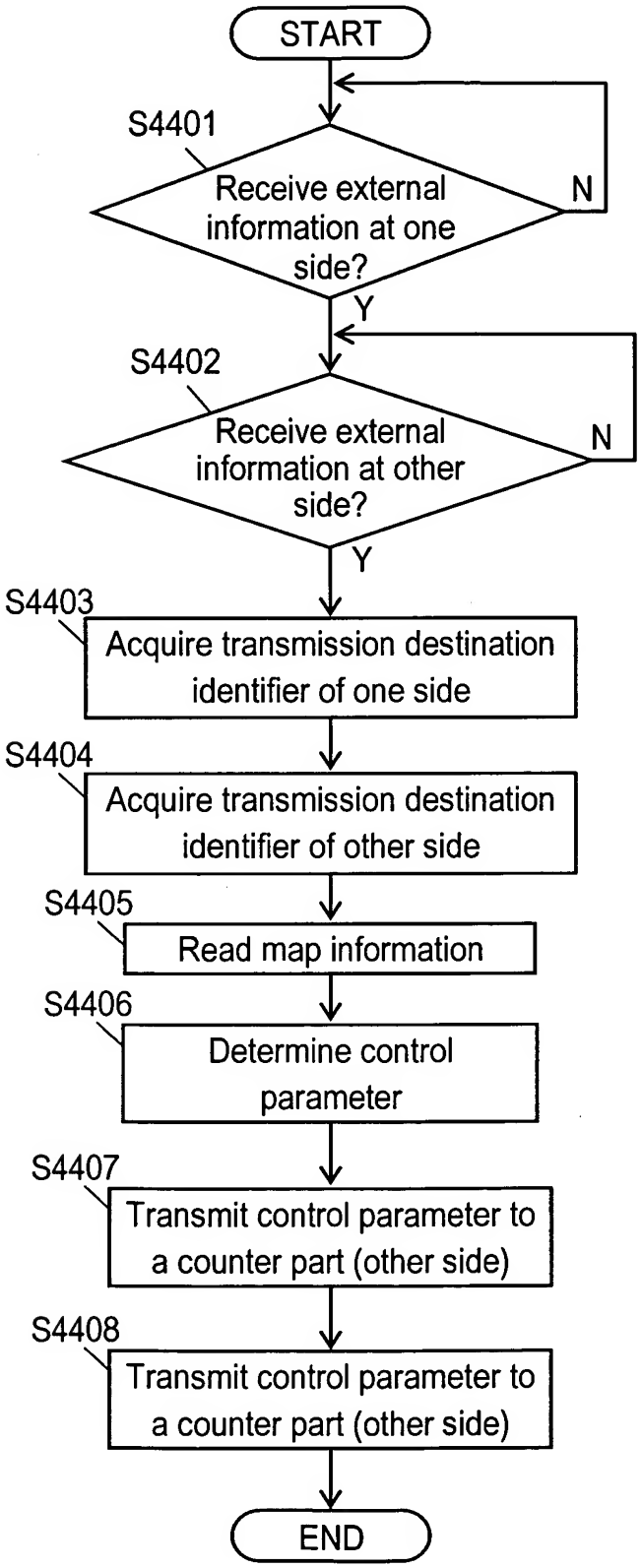
START
S4401
Receive external information at one side?
N
Y
S4402
Receive external information at other side?
N
Y
S4403
Acquire transmission destination identifier of one side
S4404
Acquire transmission destination identifier of other side
S4405
Read map information
S4406
Determine control parameter
S4407
Transmit control parameter to a counter part (other side)
S4408
Transmit control parameter to a counter part (other side)
END

FIG. 45

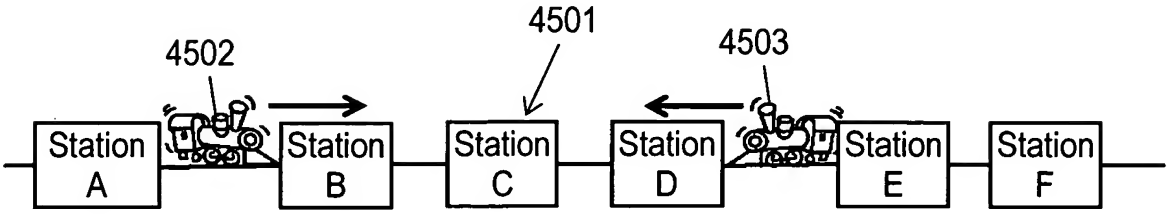

FIG. 46

4601

Station identifier	Station A	Station B	Station C	Station D	Station E	Station F
Distance	0	5.2km	8.4km	10.3km	15.0km	21.3km

FIG. 47

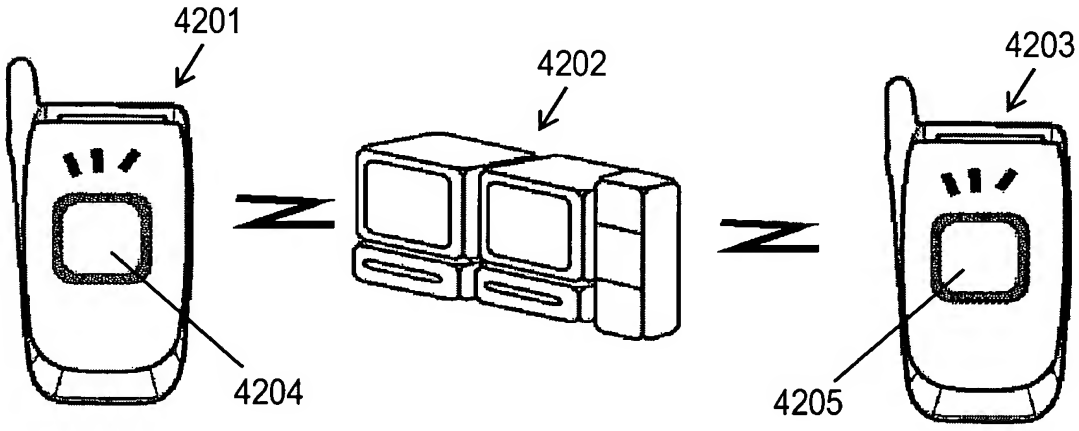

FIG. 48

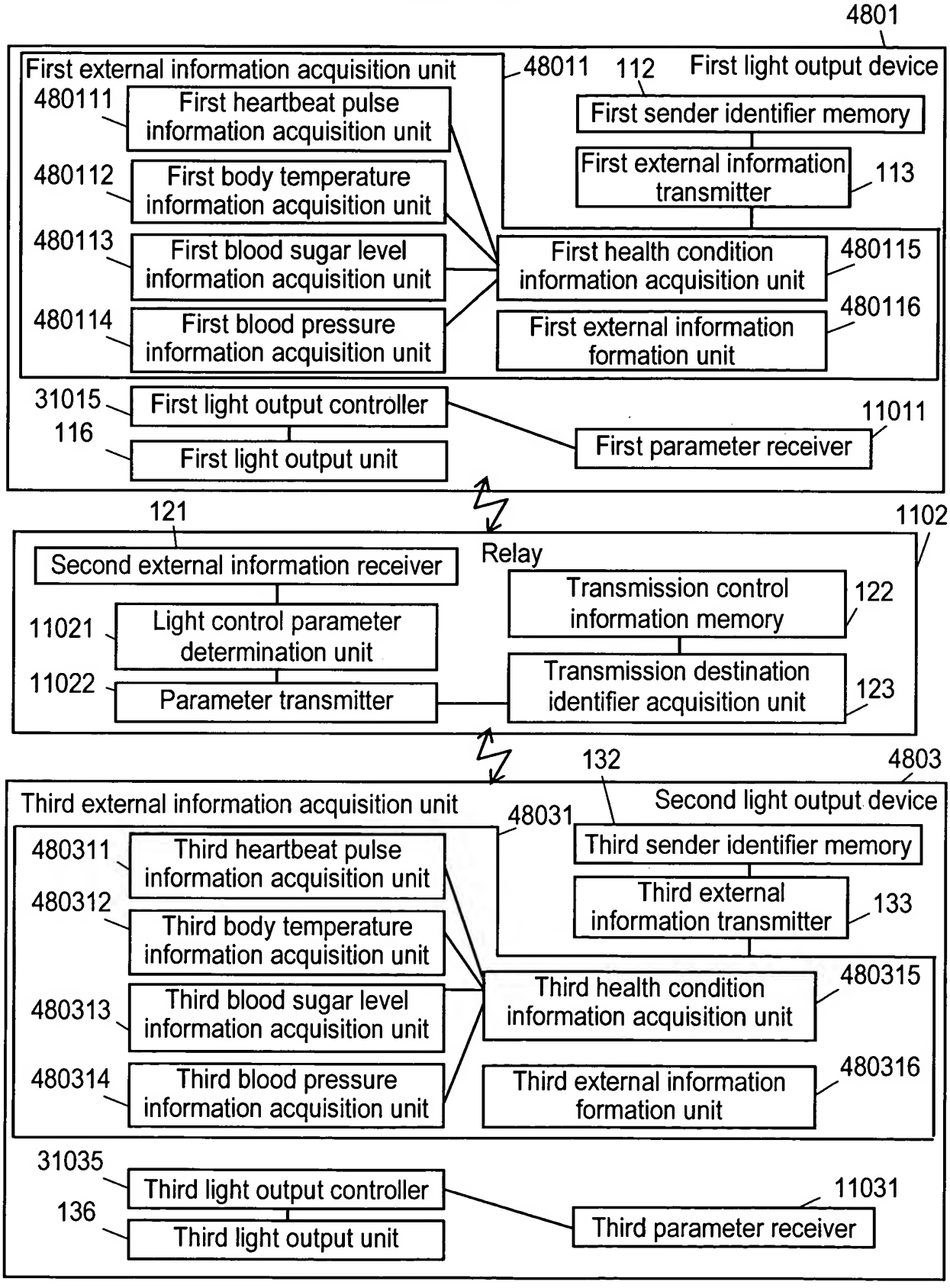
4801
First external information acquisition unit
480111
First heartbeat pulse information acquisition unit
480112
First body temperature information acquisition unit
480113
First blood sugar level information acquisition unit
480114
First blood pressure information acquisition unit
48011
112
First light output device
First sender identifier memory
First external information transmitter
113
First health condition information acquisition unit
480115
First external information formation unit
480116
31015
First light output controller
116
First light output unit
11011
First parameter receiver
121
1102
Second external information receiver
Relay
Transmission control information memory
122
11021
Light control parameter determination unit
11022
Parameter transmitter
Transmission destination identifier acquisition unit
123
132
4803
Third external information acquisition unit
Second light output device
48031
480311
Third heartbeat pulse information acquisition unit
480312
Third body temperature information acquisition unit
480313
Third blood sugar level information acquisition unit
480314
Third blood pressure information acquisition unit
Third sender identifier memory
Third external information transmitter
133
Third health condition information acquisition unit
480315
Third external information formation unit
480316
31035
Third light output controller
136
Third light output unit
11031
Third parameter receiver

FIG. 49

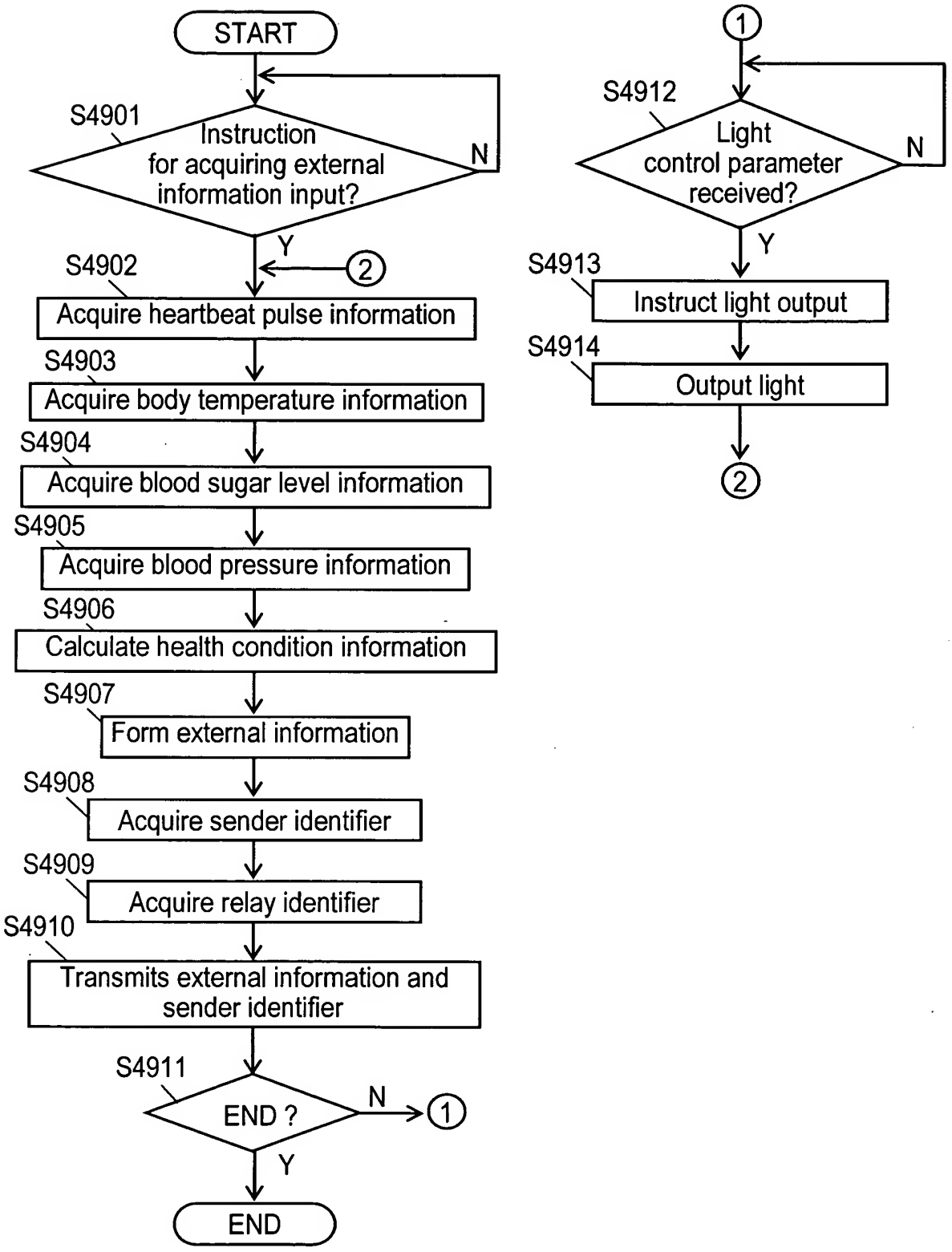
START
S4901
Instruction for acquiring external information input?
N
Y
2
S4902
Acquire heartbeat pulse information
S4903
Acquire body temperature information
S4904
Acquire blood sugar level information
S4905
Acquire blood pressure information
S4906
Calculate health condition information
S4907
Form external information
S4908
Acquire sender identifier
S4909
Acquire relay identifier
S4910
Transmits external information and sender identifier
S4911
END ?
N
1
Y
END
1
S4912
Light control parameter received?
N
Y
S4913
Instruct light output
S4914
Output light
2

FIG. 50

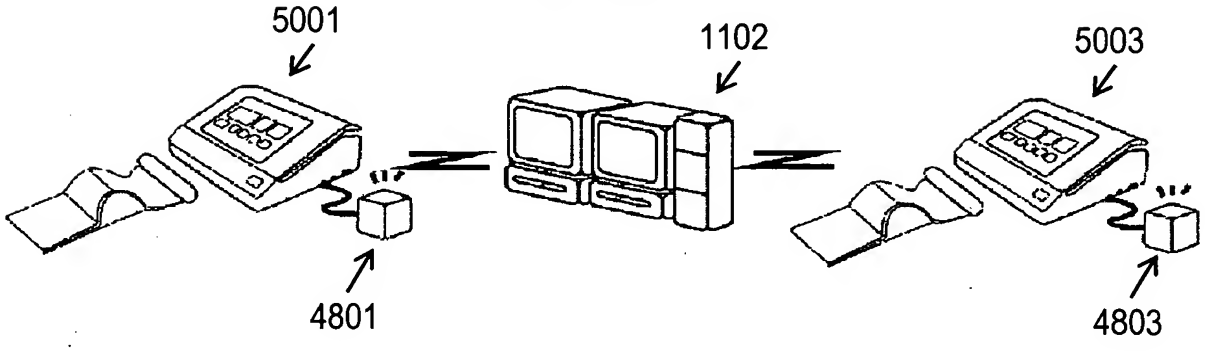

FIG. 51

Point	Heart beat	Blood temperature	Blood sugar	Blood pressure
0	91~	40.1~	151~	High (Not less than180, Not more than 70) Low (130~140, 30~40)
5	81~90	39.1~40.0	141~150	High (170~180, 70~80) Low (120~130, 40~50)
10	71~80	38.1~39.0	131~140	High (160~170, 80~90) Low (110~120, 40~50)
15	61~70	~35.9 37.3~38.0	121~130	High (150~160, 90~100) Low (100~110, 50~60)
20	51~60	36.0~36.2 36.9~37.2	111~120	High (140~150, 100~110) Low (90~100, 60~70)
25	~50	36.3~36.8	~110	High 110~140 Low 70~90

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FIG. 52

First external information 5201

<Heart beat pulse information>	78
<Blood temperature information>	36.5
<Blood sugar information>	80
<Blood pressure information>	133.70
<Heat condition information>	85

Second external information 5202

<Heart beat pulse information>	50
<Blood temperature information>	35.5
<Blood sugar information>	140
<Blood pressure information>	150,105
<Heat condition information>	65

FIG. 53

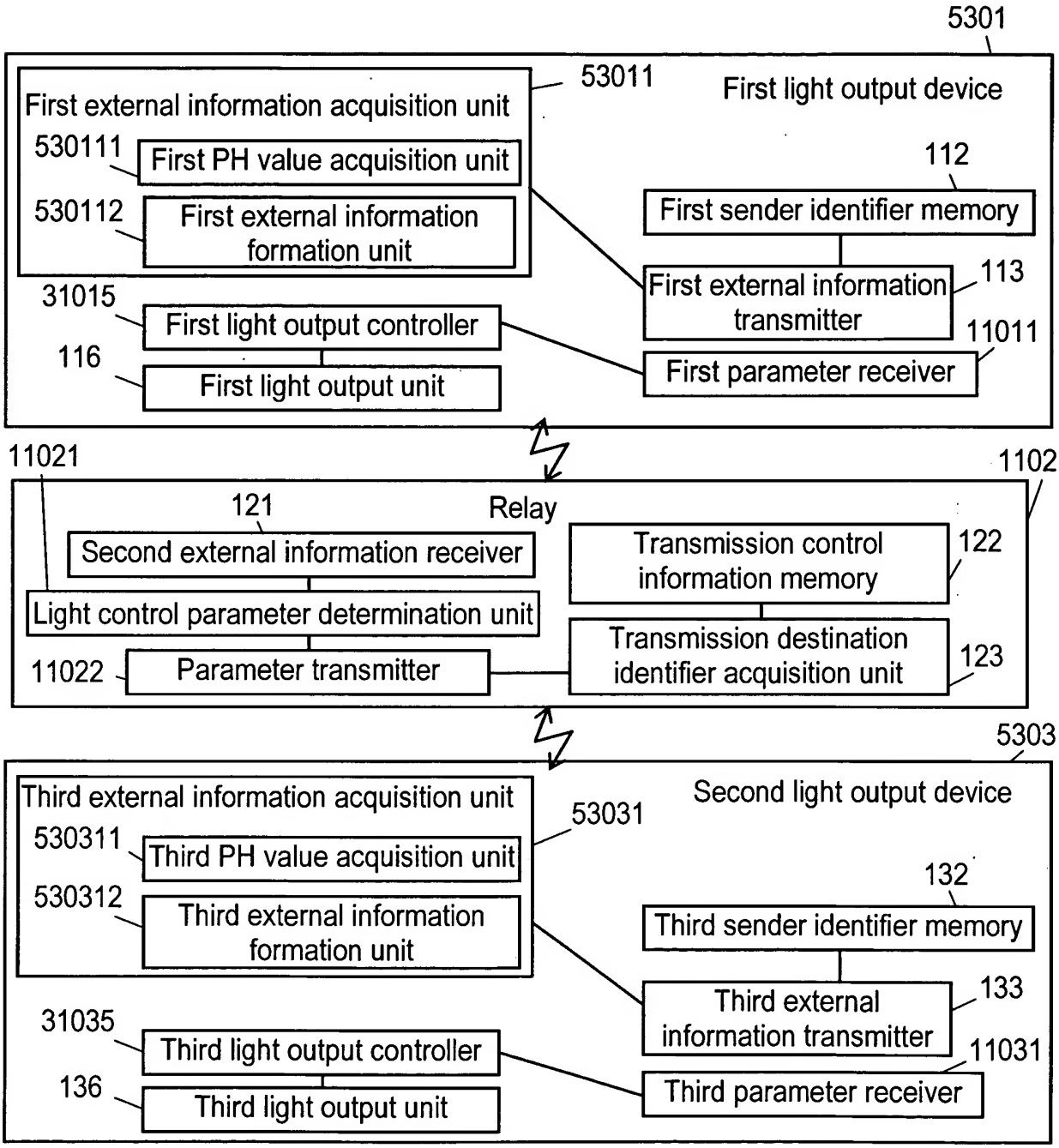
5301
First light output device
53011
First external information acquisition unit
530111
First PH value acquisition unit
530112
First external information formation unit
31015
First light output controller
116
First light output unit
112
First sender identifier memory
First external information transmitter
113
11011
First parameter receiver
11021
1102
Relay
121
Second external information receiver
Light control parameter determination unit
11022
Parameter transmitter
Transmission control information memory
122
Transmission destination identifier acquisition unit
123
5303
Second light output device
Third external information acquisition unit
53031
530311
Third PH value acquisition unit
530312
Third external information formation unit
31035
Third light output controller
136
Third light output unit
132
Third sender identifier memory
Third external information transmitter
133
11031
Third parameter receiver

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FIG. 54

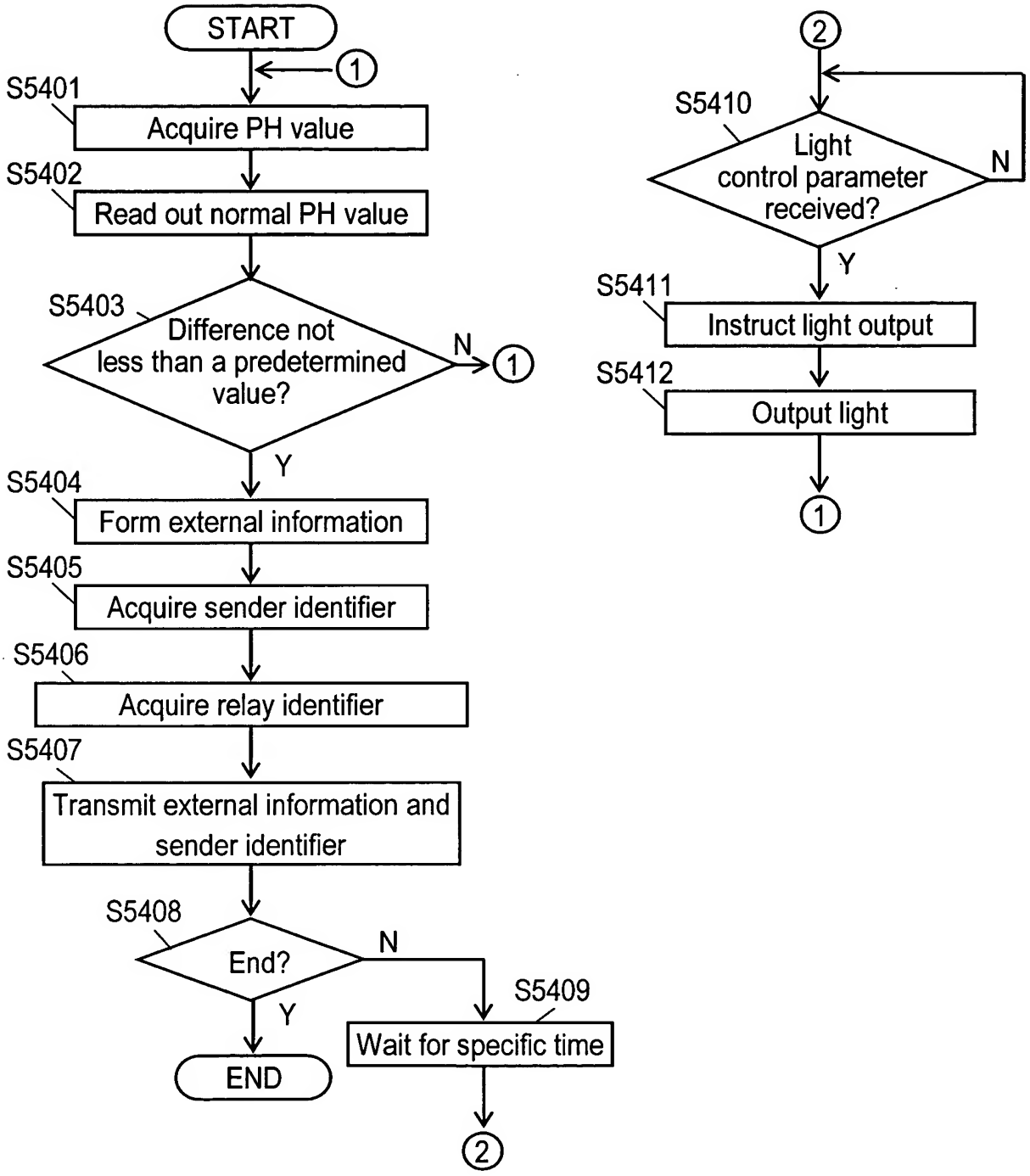

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FIG. 55

Parameter	First light output device	Second light output device
0	NO	NO
1	YES	YES
1	NO	YES
5	YES	YES

FIG. 56

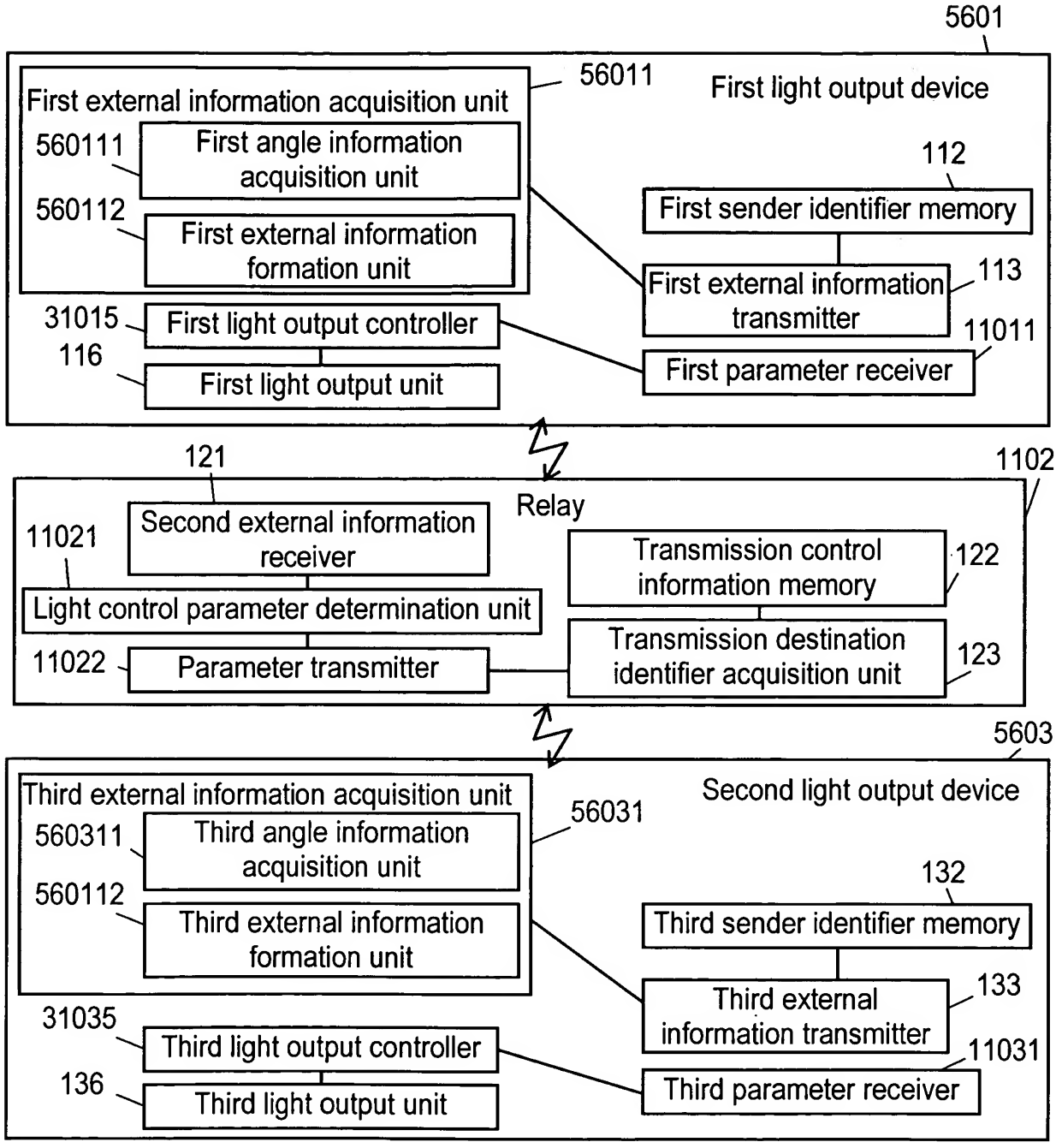

5601
First light output device
56011
First external information acquisition unit
560111
First angle information acquisition unit
560112
First external information formation unit
31015
First light output controller
116
First light output unit
112
First sender identifier memory
113
First external information transmitter
11011
First parameter receiver
121
Second external information receiver
11021
Light control parameter determination unit
11022
Parameter transmitter
Relay
1102
Transmission control information memory
122
Transmission destination identifier acquisition unit
123
5603
Second light output device
Third external information acquisition unit
56031
560311
Third angle information acquisition unit
560112
Third external information formation unit
31035
Third light output controller
136
Third light output unit
132
Third sender identifier memory
133
Third external information transmitter
11031
Third parameter receiver

FIG. 57

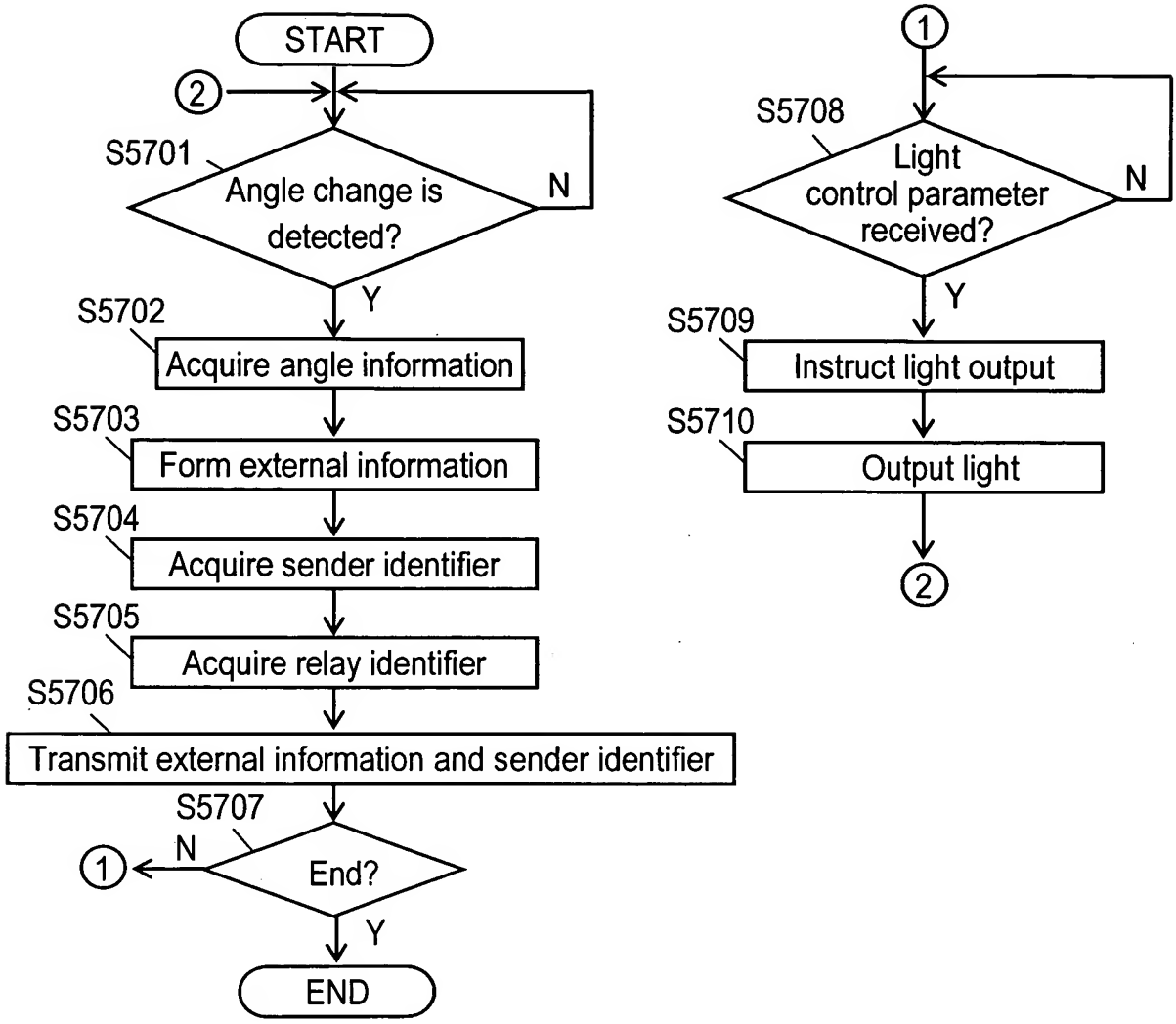

START
2
S5701
Angle change is detected?
N
Y
S5702
Acquire angle information
S5703
Form external information
S5704
Acquire sender identifier
S5705
Acquire relay identifier
S5706
Transmit external information and sender identifier
S5707
N
End?
1
Y
END
1
S5708
Light control parameter received?
N
Y
S5709
Instruct light output
S5710
Output light
2

FIG. 58

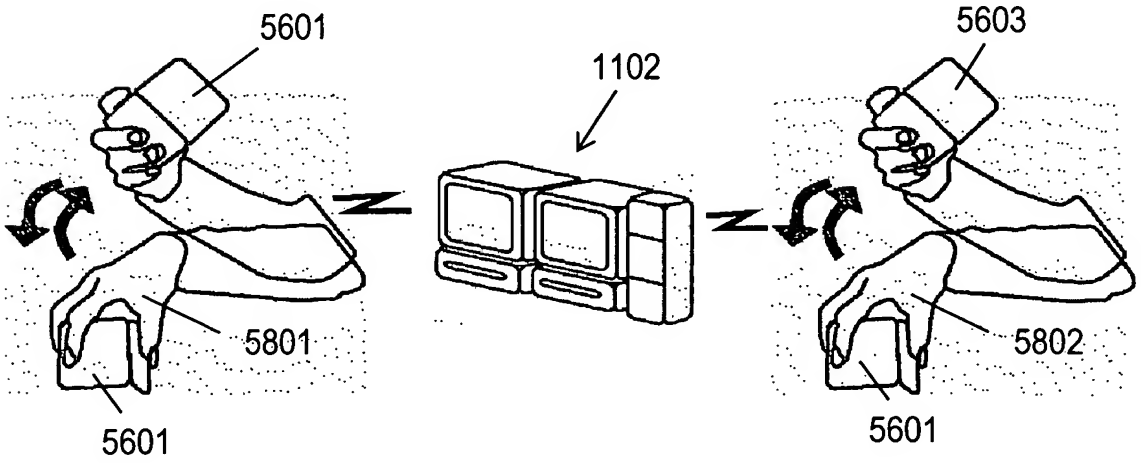

5601
1102
5603
5801
5802
5601
5601

FIG. 59

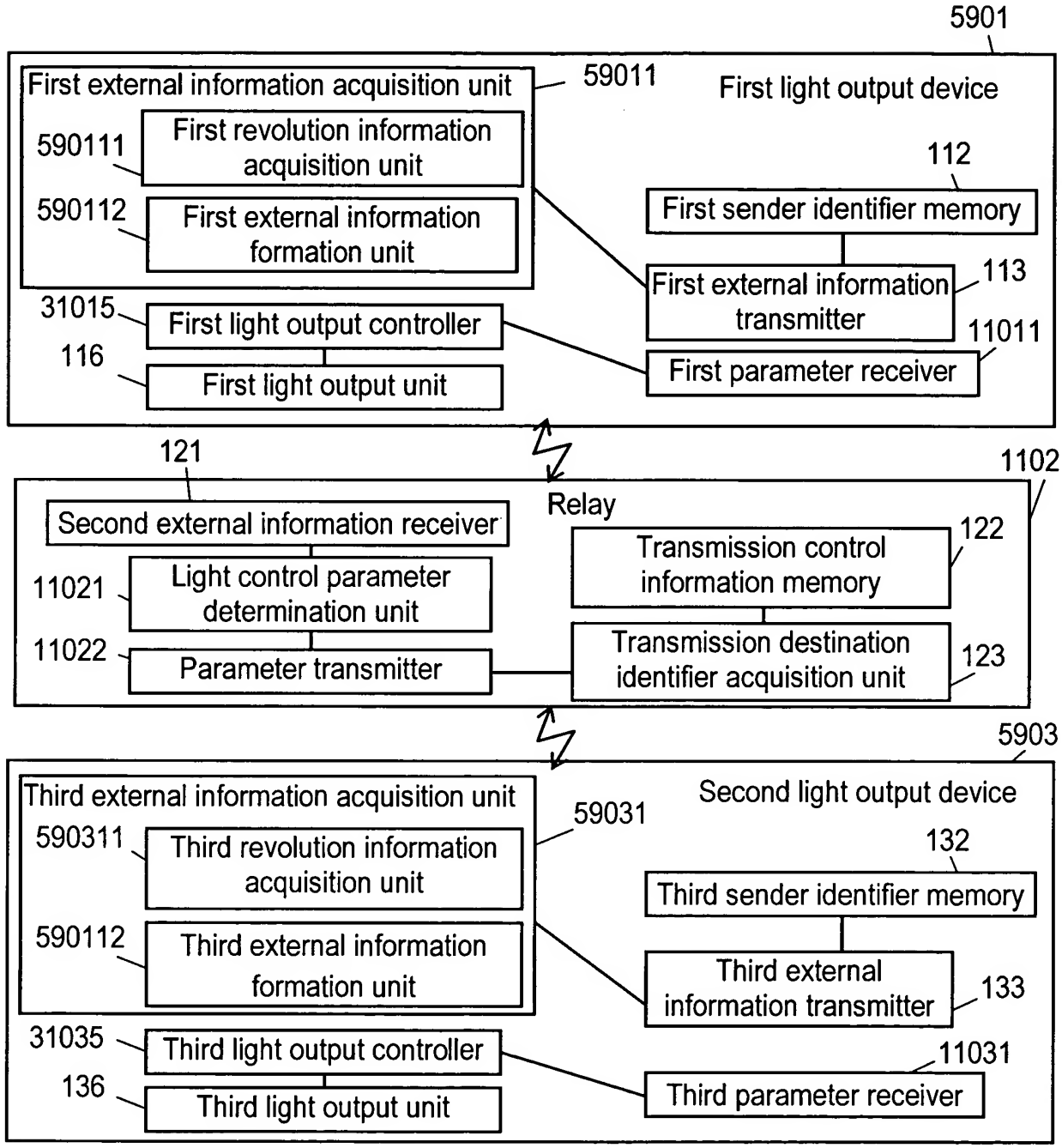

5901
First external information acquisition unit
59011
First light output device
590111
First revolution information acquisition unit
112
590112
First external information formation unit
First sender identifier memory
First external information transmitter
113
31015
First light output controller
11011
116
First light output unit
First parameter receiver
121
1102
Relay
Second external information receiver
Transmission control information memory
122
11021
Light control parameter determination unit
11022
Parameter transmitter
Transmission destination identifier acquisition unit
123
5903
Third external information acquisition unit
Second light output device
59031
590311
Third revolution information acquisition unit
132
590112
Third external information formation unit
Third sender identifier memory
Third external information transmitter
133
31035
Third light output controller
11031
136
Third light output unit
Third parameter receiver

FIG. 60

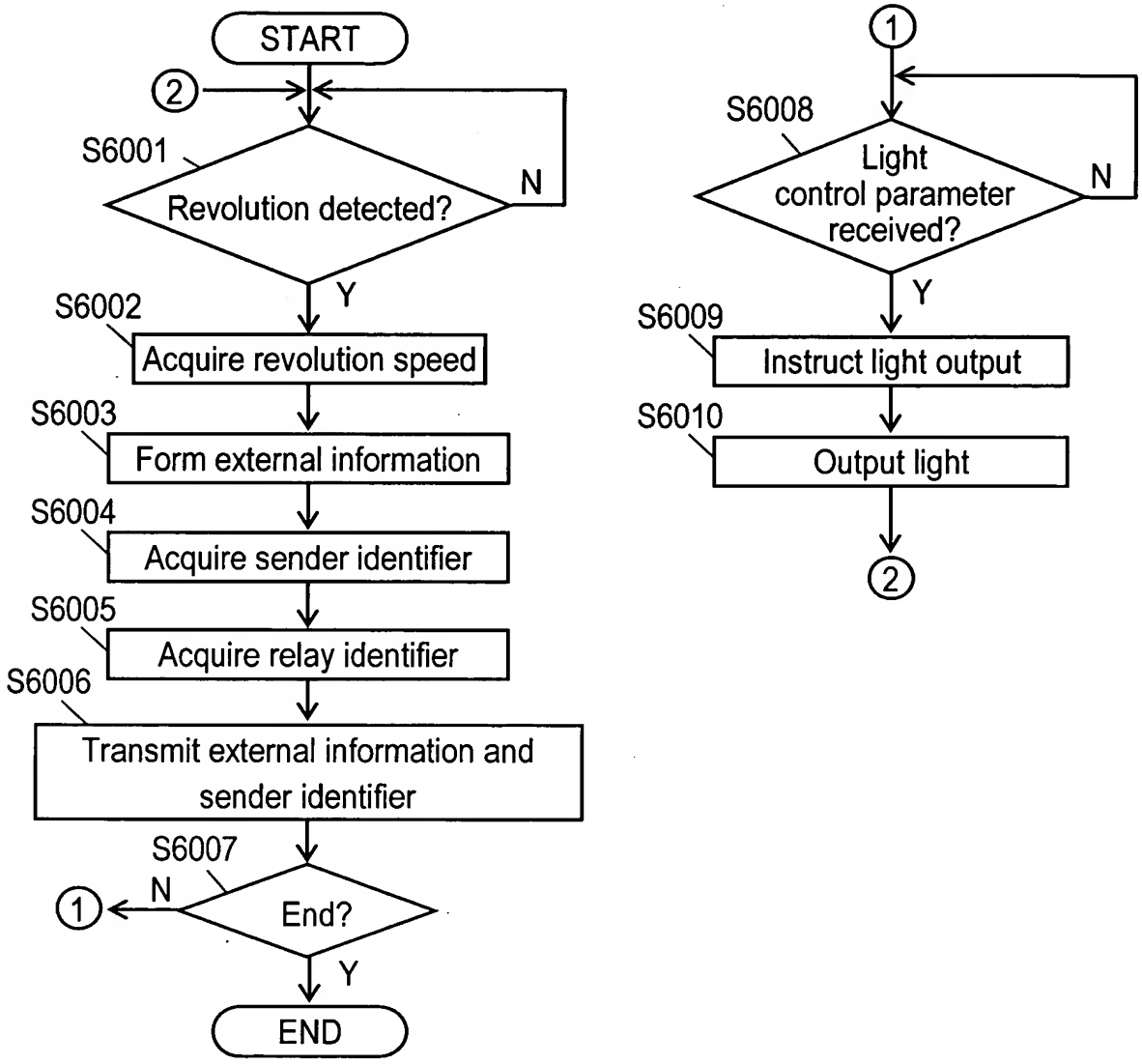

START
2
S6001
Revolution detected?
N
Y
S6002
Acquire revolution speed
S6003
Form external information
S6004
Acquire sender identifier
S6005
Acquire relay identifier
S6006
Transmit external information and sender identifier
S6007
N
End?
1
Y
END
1
S6008
Light control parameter received?
N
Y
S6009
Instruct light output
S6010
Output light
2

FIG. 61

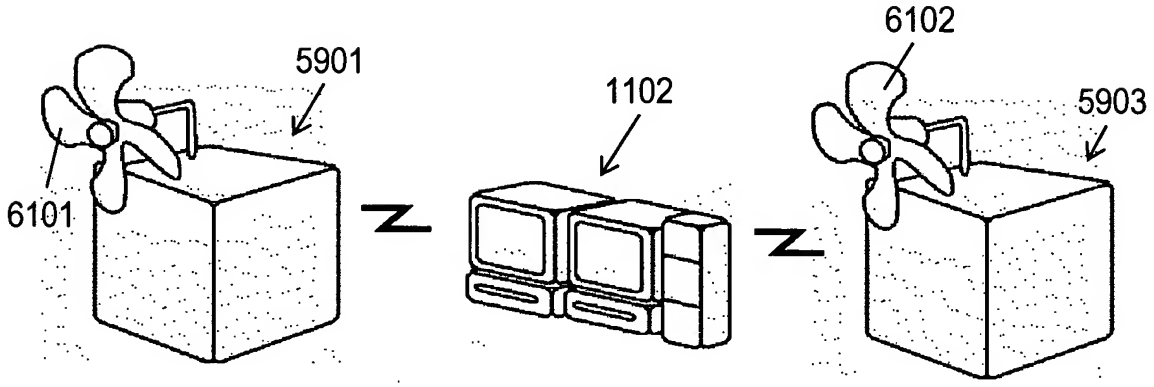


FIG. 62

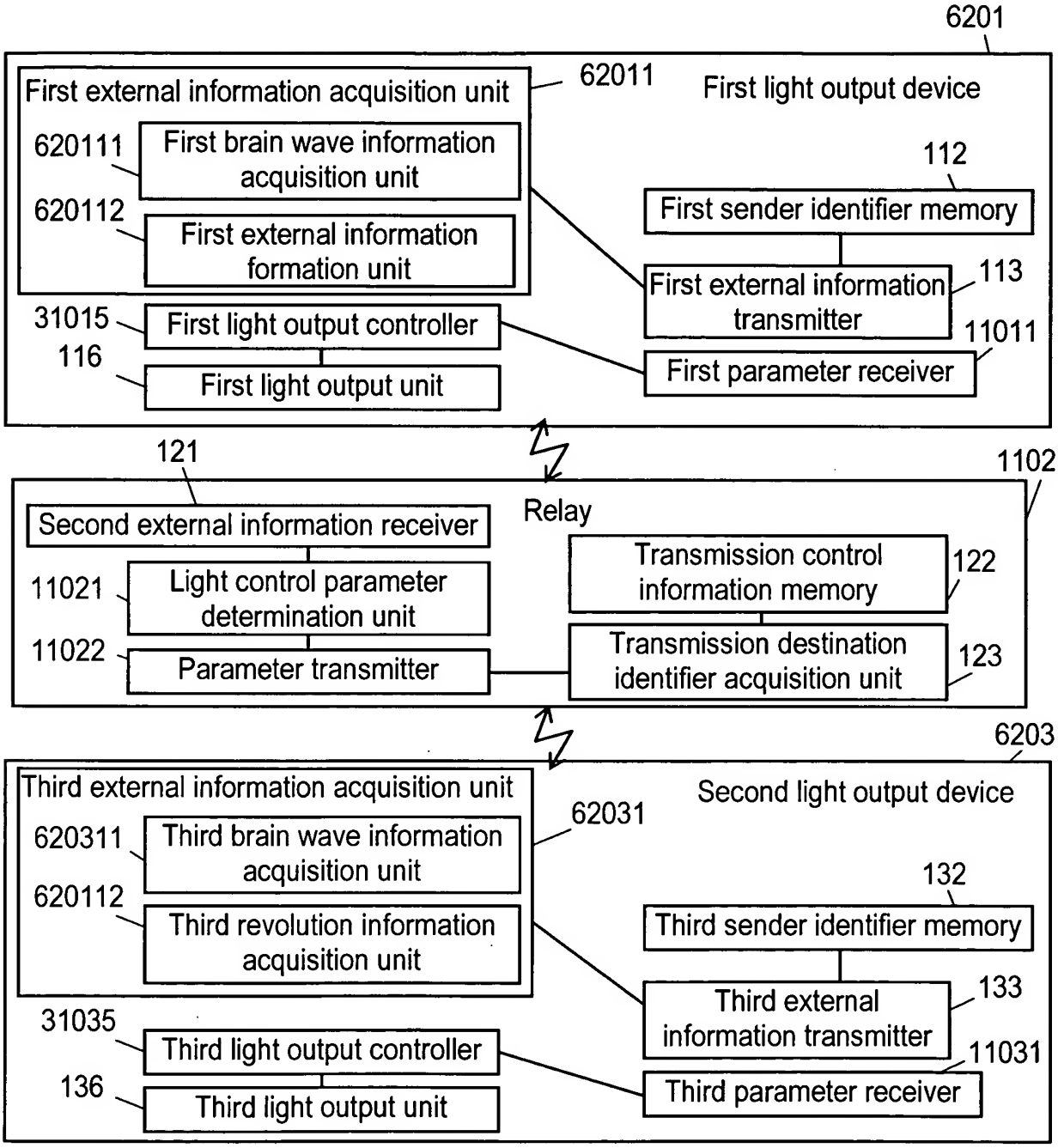
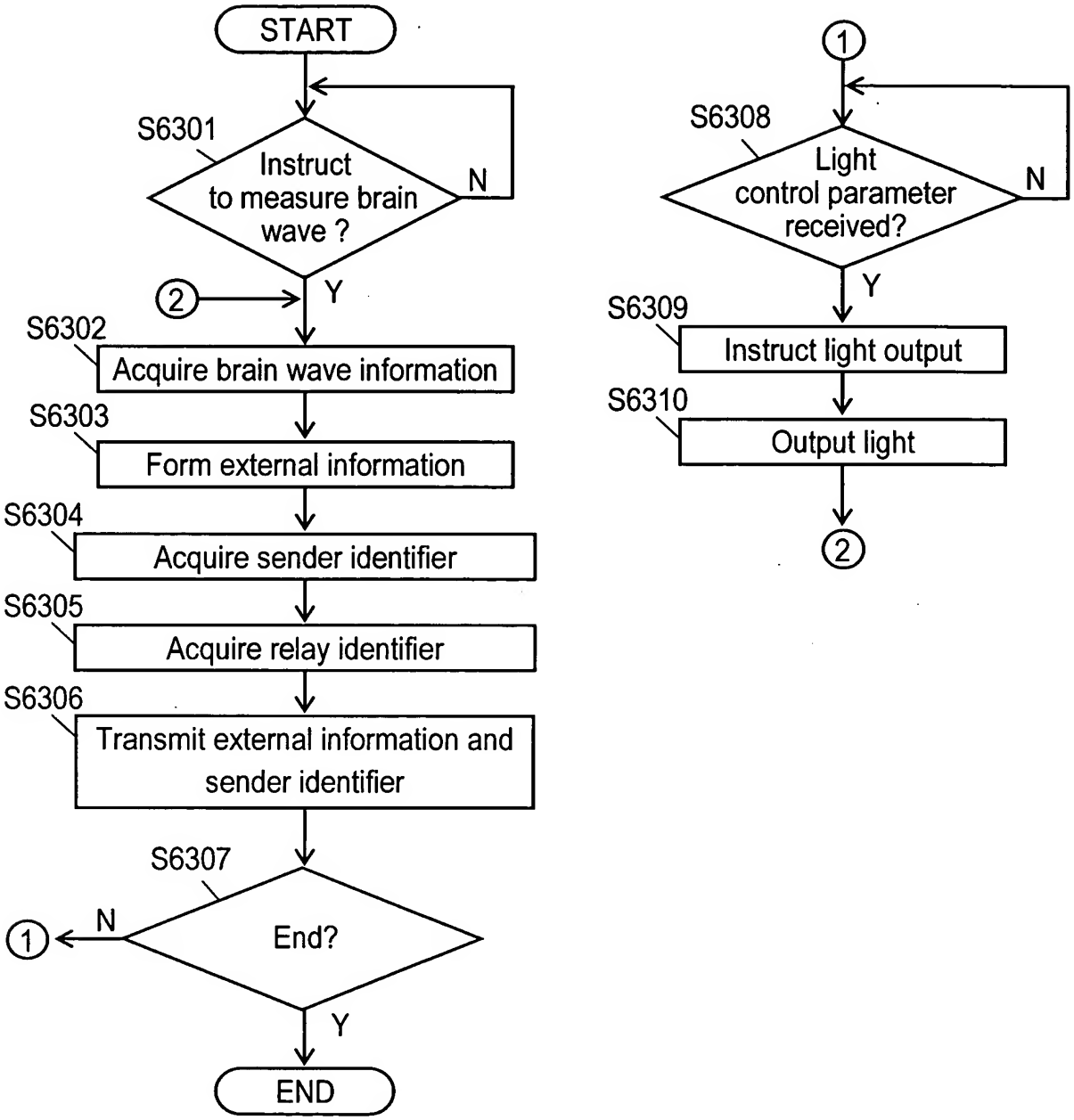

6201
First external information acquisition unit
62011
First light output device
620111
First brain wave information acquisition unit
620112
First external information formation unit
112
First sender identifier memory
First external information transmitter
113
31015
First light output controller
116
First light output unit
11011
First parameter receiver
121
1102
Relay
Second external information receiver
Transmission control information memory
122
11021
Light control parameter determination unit
11022
Parameter transmitter
Transmission destination identifier acquisition unit
123
6203
Third external information acquisition unit
Second light output device
62031
620311
Third brain wave information acquisition unit
620112
Third revolution information acquisition unit
132
Third sender identifier memory
Third external information transmitter
133
31035
Third light output controller
136
Third light output unit
11031
Third parameter receiver

FIG. 63


START
S6301
Instruct to measure brain wave ?
N
Y
2
S6302
Acquire brain wave information
S6303
Form external information
S6304
Acquire sender identifier
S6305
Acquire relay identifier
S6306
Transmit external information and sender identifier
S6307
End?
N
1
Y
END
1
S6308
Light control parameter received?
N
Y
S6309
Instruct light output
S6310
Output light
2

Reference numerals in the drawings

1, 1101, 1401, 2501, 3101, 4001, 4201, 4801, 5301, 5601, 5901, 6201	First light output device
12, 1102, 3202, 4202	Relay
13, 1103, 1403, 2503, 3103, 4003, 4203, 4803, 5303, 5603, 5903, 6203	Second light output device
111, 14011, 31011, 40011, 42011, 48011, 53011, 56011, 59011, 62011	First external information acquisition unit
112	First sender identifier memory
113	First external information transmitter
114	First external information receiver
115, 11015, 14015, 25015, 31015	First light output controller
116, 14013, 25013	First light output unit
121	Second external information receiver
122	Transmission control information memory
123	Transmission destination identifier acquisition unit
124	Second external information transmitter
131, 14031, 31011	Third external information acquisition unit
132	Third sender identifier memory
133	Third external information transmitter
134	Third external information receiver
135, 11035, 14035, 25035	Third light output controller
136, 14033, 25033	Third light output unit
3104	First information processing terminal
3105	Second information processing terminal
11011, 14014	First parameter receiver
11021, 32021, 42021	Light control parameter determination unit
11031, 14034	Third parameter receiver
14012, 25012	First type information memory
14032, 25032	Third type information memory
28031, 32022	External information memory
32022, 42022	Map information memory